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Wireless LANs

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| WUR Reference Models |
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| Author(s): |
| Name | Company | Address | Phone | email |
| Mark Hamilton | Ruckus/ARRIS | 350 W. Java DrSunnyvale, CA | +1 303 818 8472 | mark.hamilton2152@gmail.com  |
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Abstract

This document contains proposed architectural reference models for the TGba (WUR) concepts.

R0 – Initial discussion document.

R1 – Added non-AP STA, after June 21 telecon. Minor tweaks to dual-band “AP”

# Introduction and Purpose

The following figures are proposed as a reference models for the architecture of a non-AP STA and an AP, when WUR (as being developed by 802.11ba) are included.

Note that the non-AP STA is an abstract representation (as with all 802 reference models), and implementations may combine or split functions across other boundaries, so long as the externally visible behavior matches the reference.

Three situations are considered:

* A non-AP STA, which uses a WUR for wake up from deep power-saving state (RX only)
* An AP, which can transmit WUR format frames, per 802.11ba subclause 9.10. It is important that an AP with WUR capability is not architecturally different from a non-WUR AP. The only difference is that the WUR-capable AP’s MAC and PHY entities support the 802.11ba clauses 31 and 32 behaviors, including the ability to switch to MC-OOK modulation during transmit.
* A “dual-band AP” which is a device that comprises two (or more) APs on different bands (or channels) and which share sufficient state information via a implementation-defined mechanism, to allow one AP to support WUR operation on behalf of another such AP, communicating to a non-AP STA that is associated with the second AP.

The first and third situations are shown in the following figures. The second situation is unchanged from the baseline AP reference model(s) in 802.11.

Figure 1 – non-AP STA:



Figure 2 – dual-band “AP” device

