Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	**HO Overview Section Cleanup 5 – Termination of Service Section**
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Re:	Response to IEEE 802.16e-04/06 (Call for Contributions on IEEE 802.16e/D1)
Abstract	HO Overview Section Cleanup 5 – Termination of Service Section
Purpose	Correct overview section flow and language in HO Overview Section
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HO Overview Section Cleanup 5

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Problem:
As currently defined, mechanics for hand-over are incomplete or poorly defined. Elements are out of order.

Remedy:
Revise hand-over process overview to more logical format and increase language clarity.

Remedy 1:

Provide specific timing for break-before-make/make-before-make Serving BS resources release (MSS needs to know how much time it has to get an HO done to make decisions). Give the MSS an easy mechanism for Re-entering Normal Operations with the current Serving BS on failed/aborted HO attempt. Move **Termination with the Serving BS** in logical section sequence.

*[Modify **1.4.1.2.2.4 Termination with the Serving BS**, page 12, lines 20-29, relocate modified/normative text for section to section **6.4 Data/Control Plane**; editor will make appropriate allocation of numbering (??) for subsection:]*

~~1.4.1.2.2.4~~ **6.4.??.5** **Termination with the Serving BS**

~~After the [MSS/BS]MOB_HO-REQ/MOB_HO-RSP handshake is completed, the MSS may begin the actual HO. At some stage during the HO process the MSS terminates service with the Serving BS. This is done by sending a MOB_HO-IND MAC message with the Serving BS release option (HO_IND_type=00). If the HO_IND_type field has the value of 00 (Serving BS release option), the BS may either close all connections and discard MAC state machines and MAC PDUs associated with the MSS or it may retain the connections, MAC state machine and PDU associated with the MSS to be forwarded to the Target BS for service continuation, or to be discarded upon reception of hand-over indication from the Target BS.~~

The final step in hand-over/network re-entry is any termination of MSS services with previous Serving BS and the transition of a Target BS to be the new Serving BS.

If Target BS had received a HO notification from Serving BS over the backbone (see section Backbone network HO procedures), or MSS RNG-REQ to Target BS during HO network entry included an unexpired Serving BS ID, then upon MSS entering Normal Operation mode with Target BS, Target BS may send an I-am-host-of message notification message over the backbone network to the Serving BS and any Authorizing Station.

For break-before-make HO, the Serving BS shall terminate MSS services, all connections belonging to the MSS and the context associated with them (i.e. information in queues, PDUs, ARQ state-machine, counters, timers, etc…), at a time no sooner than MSS Context Life Timer after receipt of a MOB_HO-IND MAC message with the Serving BS release option (HO_IND_type=00). For make-before-break HO, the Serving BS shall terminate MSS services the sooner of 1) MSS Context Life Timer after MOB_HO-IND Serving BS release notification or 2) after receipt of a backbone message acknowledging MSS network re-entry at another BS. Up until the time

of termination of MSS services on a Serving BS, an MSS may return to Normal Operations with the Serving BS through the initiation of any UL traffic and the cancellation of the pending HO prior to timer expiration.

Regardless of transmittal of a backbone message or its acknowledgment during HO, Target BS becomes the new Serving BS for all purposes upon MSS entering Normal Operations with the Target BS.

*[Add to **11.7 REG-REQ/RSP management message encodings**, 80216d/D3 page 619, line 1, add new subsection:]*

11.7.7 MSS Service Context Retention Timer

This field indicates the minimum time, in milliseconds, that a Serving BS shall retain the MSS service context, all connections belonging to the MSS and the context associated with them (i.e. information in queues, PDUs, ARQ state-machine, counters, timers, etc…), after notification of an instruction to terminate the services.

Type	Length	Value	Scope
16	1	in ms; not less than 100ms; not more than 10000 ms	REG- REQ REG-RSP