Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	Figure for SS CDMA initial ranging
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Re:	IEEE 802.16e-2005
Abstract	Standard is missing a figure of SS behavior during CDMA initial ranging, after MS transmitted RNG-REQ message (with SS MAC address) and waits for RNG-RSP with matching SS MAC address.
Purpose	Adopt proposed changes
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Figure for SS CDMA initial ranging

Itzik Shahar

1. Motivation

Problem: the standard doesn't provide any info on what MS should do after it transmits RNG-REQ during initial ranging (or HO ranging).

2. Proposed solution

When the MS receives CDMA_Allocation_IE (assigned to MS due to successful CDMA ranging) the MS shall transmit RNG-REQ message with SS MAC address TLV.
At time of transmission of RNG-REQ, MS shall start timer T3 and wait for RNG-RSP message with matching SS MAC address (TLV), basic CID and primary management CID.
If T3 expires before MS receives a RNG-RSP message with matching MAC address, it shall increment the ranging retry counter and start CDMA ranging from the beginning (this is because, MS has still not any basic CID assigned and cannot request BW for transmitting RNG-REQ otherwise).

If MS receives RNG-RSP with matching MAC address, before T3 expires, the MS shall check if RNG-RSP message included "ranging status" TLV:

- If "ranging status" TLV is "abort", the MS shall abort ranging and scan for another BS.
- If "ranging status" TLV is "success", the MS shall apply PHY corrections.
- If "ranging status" TLV is "continue", the MS shall apply PHY corrections and perform periodic CDMA ranging until it receives RNG-RSP message with "success".

At this point, MS shall update basic CID and primary management CID and transmit SBC-REQ message to initiate negotiation of basic capabilities with the BS.

3. Text changes

[Insert the following figure after figure 86a:]

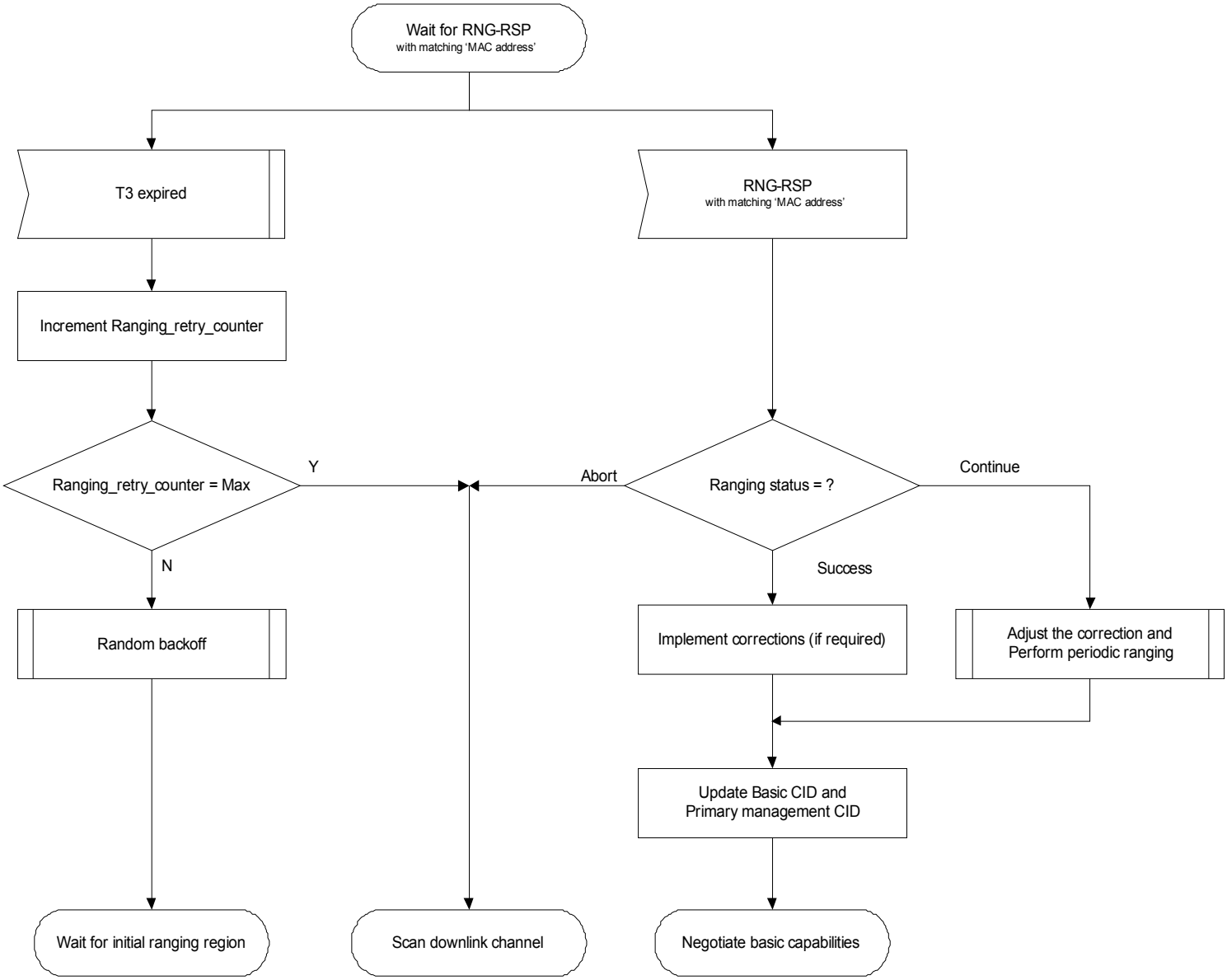

Figure 86b – CDMA initial ranging – SS (part 4)