Project: IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs)

Submission Title: IG SEC Inbound state machine changes
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Re: IG SEC Inbound state machine changes

Abstract: IG SEC changes required for the inbound state machine for proposed solution for the macFrameCounter issue

Purpose:

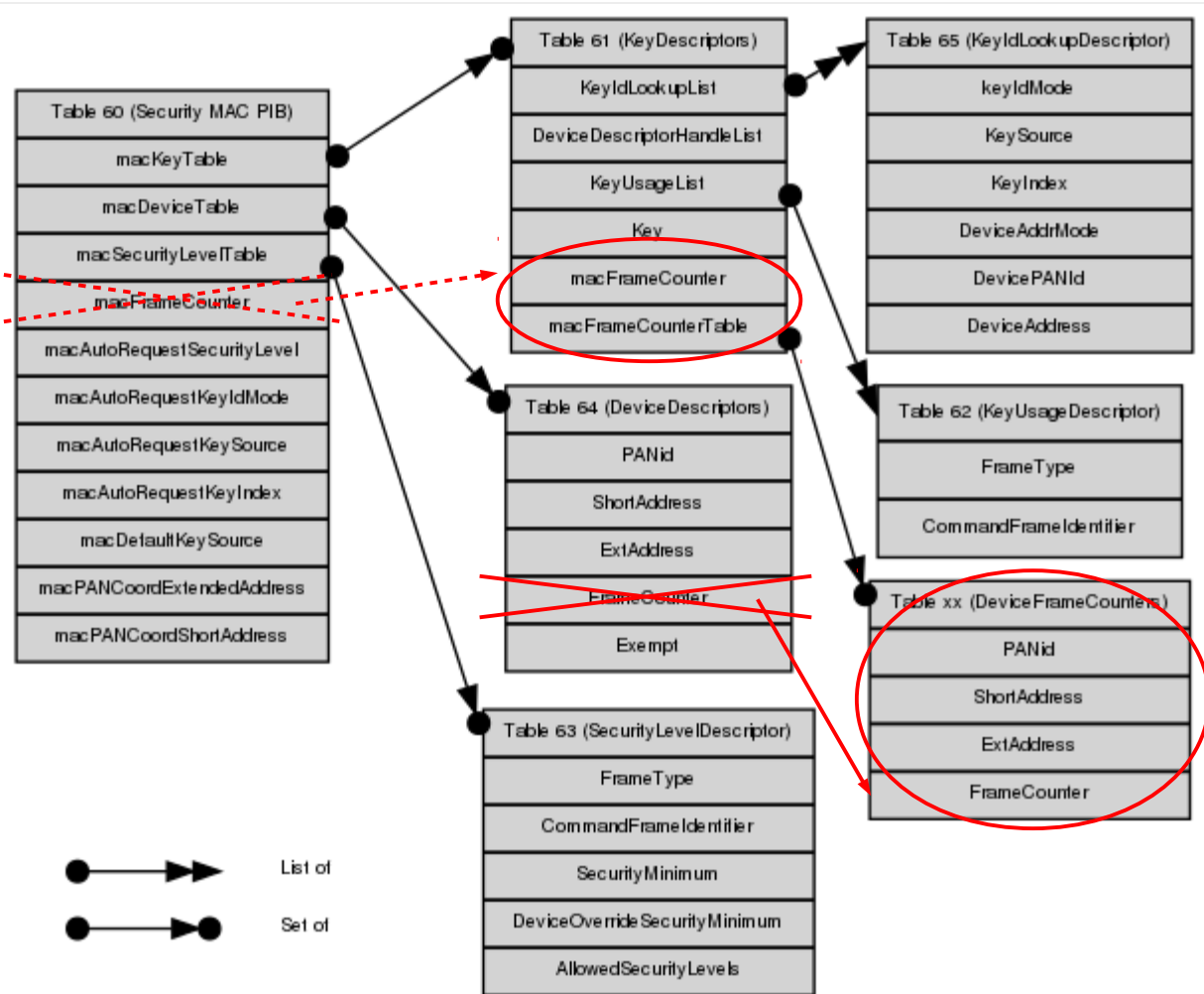# IG SEC Inbound State Machine

Tero Kivinen

Teleconference meeting 2014-06-10

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Inbound State Machine Changes

- Based on FrameCounter presentation 15-14-0299-00

- Based on the IEEE 802.15.4 Security Selection Excerpt 15-14-0320-00

- Changes to Section 8.2.3 and 8.2.4

Proposed Solution

Changes

- Inbound state machine might not need any changes, all changes can happen in the 8.2.4 DeviceDescriptor lookup procedure
  - It is not specified can there be multiple entries with identical ShortAddress/ExtAddress in the global macDeviceTable of DeviceDescriptors and are the DeviceDescriptorHandleList just pointers to them.
  - If so then perhaps no exact changes are needed.
  - It is not specified how the DeviceDescriptorHandleList is initialized, i.e. what happens if the DeviceDescriptorHandleList does not have entry for the device, but the global macDeviceTable has?

8.2.4 d)

- d) For each DeviceDescriptor in DeviceDescriptorHandleList, if the device PAN ID matches the PANId and the and device address matches the ShortAddress, if the device addressing mode is set to SHORT_ADDRESS, or the ExtAddress, if the device addressing mode is set to EXTENDED_ADDRESS, then the procedure shall return with the corresponding DeviceDescriptor and a passed status.

8.2.4 d) Changes

- If macDeviceTable can have multiple entries for same device, then the lookup procedure can stay same. Does this need to be documented somewhere.

- Also what happens if there is no entry for the DeviceDescriptorHandleList, but there is entry in the macDeviceTable, should we add entry to DeviceDescriptorHandleList with FrameCounter of 0?

- Should we have separate DeviceDescriptor table just for the Exempt flag, and separate ones for the FrameCounter?

Summary

- My original picture didn't notice the DeviceDescriptorHandleList thus added new macFrameCounterTable, but I do not think we need that.

- We might get away with smaller changes.