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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:

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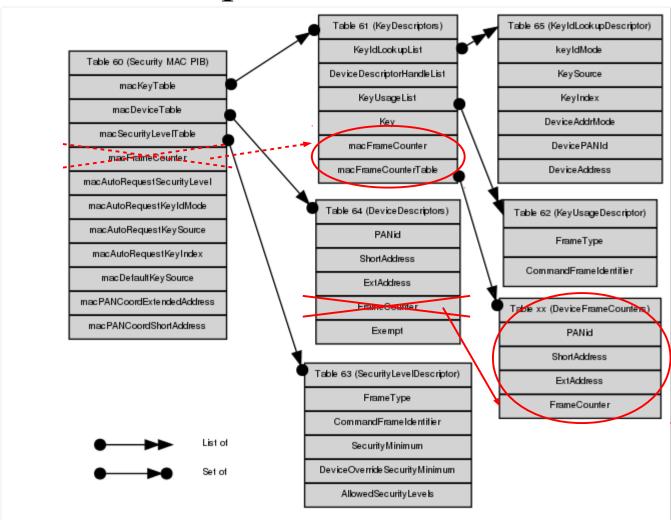
IG SEC Inbound State Machine

Tero Kivinen Teleconference meeting 2014-06-10 June 10, 2014

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.