

IEEE P802.15
Wireless Personal Area Networks

Project	IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs)
Title	Proposed Resolution for Discovery
Date Submitted	February 2025
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Re:	
Abstract	Kangjin's proposed Resolutions for CIDs 745, 746, 752, 753 754
Purpose	To propose resolution for "P802.15.4ab TM /D01 Draft Standard for Low-Rate Wireless Networks"
Notice	This document does not represent the agreed views of the IEEE 802.15 Working Group or IEEE 802.15.4ab Task Group. It represents only the views of the participants listed in the "Sources" field above.-It is offered as a basis for discussion and is not binding on the contributing individuals. The material in this document is subject to change in form and content after further study. The contributors reserve the right to add, amend or withdraw material contained herein.

Tero Kivinen	745	163	10.40.4.1	9	The text "Addressing Mode field shall be set to same mode as indicated by the AC IE" does not make sense. AC IE does not have modes indicating the address mode fields, and if it is trying to say that use same source and destination addressing modes than what was used to AC IE then that does not work, as the if the AC IE is using short address then the device transmitting association request can't use short address, as it has not yet been given short address.	Specify how the source and destination addressing fields are to be used in association request command.	Revise
<p>Disposition details: Change second paragraph of 10.40.4.1 to: "The Source Addressing Mode field and the Destination Addressing Mode field shall be set according to the address type being used as specified in 10.40.3."</p> <p>Explanation: The determination of when to use extended addressing or short addressing is described in the second paragraph of 10.40.3. The addressing mode follows from this determination.</p> <p>Draft 1 text:</p> <p>8 The Source Addressing Mode field and the Destination Addressing Mode field shall be set to the same 9 mode as indicated by the AC IE in the control message to which the HRP UWB Association Request 10 command refers.</p>							
Tero Kivinen	746	163	10.40.4.1	17	The macShortAddress cannot be used before device has been associated and given a short address, using this mac command.	Source address needs to be extended address always as device do not yet have short address.	Revise
Tero Kivinen	752	165	10.40.4.2	11	Status value 2 does not make any sense, as this is association request, thus by definition device does not yet have short address, that could be updated.	Remove status value 2.	Revise
Tero Kivinen	753	165	10.40.4.2	11	Status value 3 does not make any sense, as this is association request, thus by definition device does not yet have short address, that could be duplicate as the request does not provide short address request.	Remove status value 3.	Revise

Disposition details for 746, 752 and 753:

When Controlees use short addresses for association request message, they should generate the short address. The procedure is well described in the second paragraph of 10.40.3.

Change

“a controlee shall generate a short address and use the short address for the HRP UWB Association Request command. How to generate the short address is out of scope of this standard.” in page 162 line 12

to

“a controlee shall use a short address which is set according to the address specified by the corresponding primitive.”

Insert “ShortAddress” into Table 10-104 (page 33 line 23) as follows:

Name	Type	Valid range	Description
ShortAddress	Integer	0x0000-0xffff	The short address generated by controlee.

Change the last paragraph of 10.40.4.2 as indicated:

The Association Response command shall convey the Updated Short Address field if the Association Status field value is two-, **and the controlee shall update mac *macShortAddress* with the value of the Updated Short Address field.**

Explanation: In this association scheme, short address assignment is distributed, and is not done exclusively by the controller, as described in 10.40.3. Each associating controlee is responsible for the initial choice of short address, and the controller detects address collisions and if needed provides an updated short address to the device. With this association method, short addresses can be used during association. Status values 2 and 3 provide the means for the controller to signal to the associating controlee an address collision. The association response also provides for the controller to inform the controlee of an address collision and resolve the collision with a updated address.

Draft 1 text:

- 17 The Source Address field shall contain the *macShortAddress* or *macExtendedAddress*, depending on the
- 18 Source Addressing Mode field setting.

11 **Table 47—Valid values of the Association Status field**

Association Status	Meaning
0	Association successful.
1	Session at capacity.
2	Association successful with updated short address
3	Association denied because duplicate short addresses requested. Try again with a different short address.
4	Association denied by other reason.
5–255	Reserved.

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[2nd paragraph of 10.40.3]

- 10 A controlee shall use extended addressing when the controller is using its extended addressing. When the
- 11 controller is using its short address, a controlee shall generate a short address and use the short address for
- 12 the HRP UWB Association Request command. How to generate the short address is out of scope of this
- 13 standard. A controlee also conveys its capability information in the HRP UWB Association Request
- 14 command.

Tero Kivinen	754	165	10.40.4.2	9	The response command should include the short address the controller assigned to the controlee	Change "Updated Short Address" to "Short Address".	Reject
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					not just updated short address.		
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Disposition details:
 Controller already uses short address in MAC header. There is no reason to repeat. The Updated Short Address field is used only when the controller intends to signal the controlee of the need to use a different short address than supplied in the association request. The association method differs from the legacy 802.15.4 association process, and the short address is initially chosen by the associating controlee; the controller only needs to update the short address when a collision is detected.

Octets: 1	0/1	0/2
Association Status	Session Configuration	Updated Short Address

9 **Figure 181—HRP UWB Association Response command Content field format**

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