IEEE P802.11  
Wireless LANs

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| **TGbn D0.1 Comment Resolution for CID 2848, 3026, 3071** |
| **Date:** 2025-05-10 |

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Abstract

This submission proposes resolutions for the following 3 CIDs received for TGbn CC50 Comment Resolution:

* 2848, 3026, 3071

Revisions:

- Rev 0: Initial version of the document.

***Editing instructions formatted like this are intended to be copied into the TGbn Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

***TGbn Editor: Editing instructions preceded by “TGbn Editor” are instructions to the TGbn editor to modify existing material in the TGbn draft. As a result of adopting the changes, the TGbn editor will execute the instructions rather than copy them to the TGbn Draft.***

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| **CID** | **Comm**  **enter** | **Cate**  **gory** | **Comment** | **Proposed Change** | **Resolution** |
| 2848 | Mark RISON | G | "over the ds", as an adjective, needs hyphens | As it says in the comment | Revised  Agree in principle.  TGbn editor: please implement changes as shown in this document(888r0) tagged #2848 |
| 3026 | Mark RISON | G | "initial control frame" should be "initial Control frame" |  | Revised  Agree in principle.  TGbn editor: please implement changes as shown in this document(888r0) tagged #3026 |
| 3071 | Mark RISON | G | "the DUO mode" should be just "DUO mode" | As it says in the comment | Revised  Agree in principle.  TGbn editor: please implement changes as shown in this document(888r0) tagged #3071 |

**Propose:**

***TGbn editor: Please note that the baseline is 11bn D0.2***

***TGbn editor: Please modify the subclause 3.2 as follows***

**3.2 Definitions specific to IEEE 802.11**

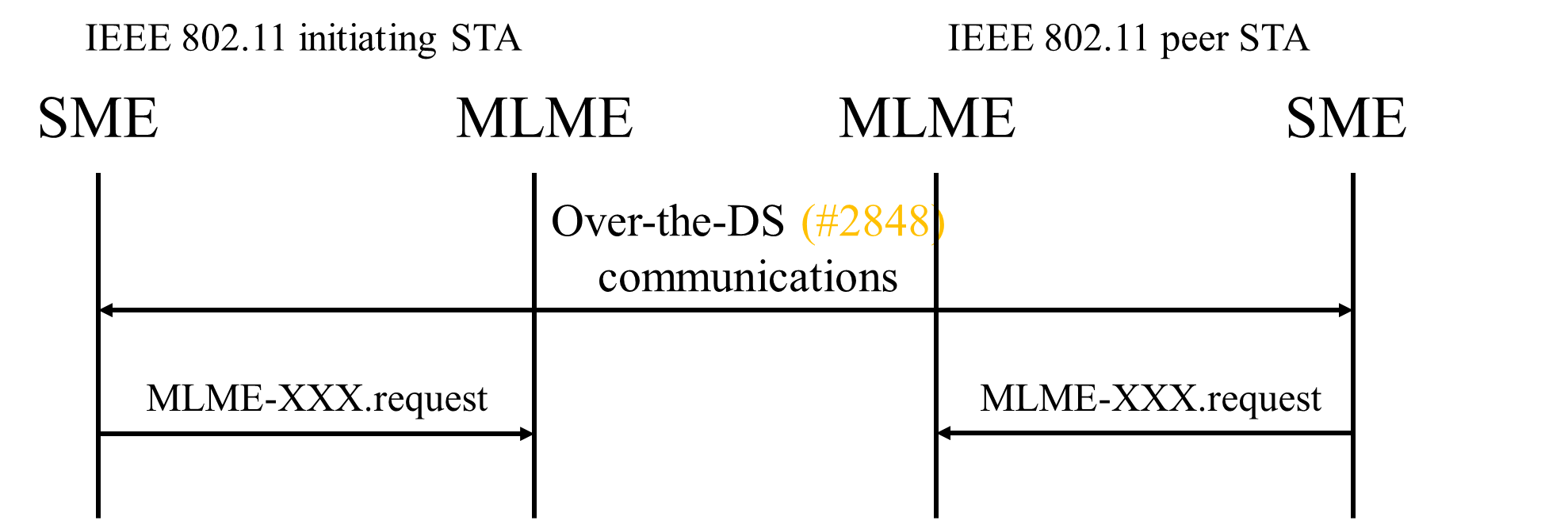
**initial(#3026) Control(#3026) frame (ICF):** [ICF] A Control frame that is sent to poll one or more STAs to determine their availability and/or willingness to participate during the TXOP. A STA’s participation might require transitioning to a different mode of operation

***TGbn editor: Please modify the title of subclause 37.15 in Contents as follows***

37.15 Padding for an initial (#3026)Control frame.......................................... 91

***TGbn editor: Please modify the Figure 6-7a in subclause 6.3.7 (Type 6) as follows***

**6.3.7 Type 6**

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**Figure 6-7a—Example usage of the Type 6 form of MLME SAP primitives, to notify the**

**MLMEs, of an initiating STA and peer STA, of communications between the SMEs of the**

***TGbn editor: Please modify the subclause 9.3.1.22.7 (Intermediate FCS) as follows***

**9.3.1.22.7 Intermediate FCS**

The Intermediate FCS field is not present except in a Trigger frame that is used as an initial(#3026) Control frame

subject to the requirements defined in 37.15 (Padding for an initial(#3026) Control frame).

***TGbn editor: Please modify the subclause 9.4.1.85 (DPS Operation Paratemeters field) as follows***

**9.4.1.85 DPS Operation Parameters field**

The DPS Padding Delay field indicates the minimum MAC padding duration that is required by a DPS STA

in an initial(#3026) Control frame to cause the STA to transition from the lower capability mode to the higher capability

mode and is calculated as defined in 37.15 (Padding for an initial(#3026) Control frame). The DPS Padding

Delay field contains an unsigned integer, in TBD units, that indicates a delay between 0 and TBD μs.

***TGbn editor: Please modify the table 9-663 in subclause 9.7.3 A-MPDU contents as follows***

**9.7.3 A-MPDU contents**

**Table 9-663—A-MPDU contents in the control response context**

|  |  |  |
| --- | --- | --- |
| **MPDU** | **Conditions** | |
| … | … | **…** |
| BlockAck | Compressed BlockAck frame with a TID that  corresponds to an HT-immediate block ack  agreement. See NOTE.  Multi-STA BlockAck frame if the preceding  PPDU:   * is either an HE or EHT TB PPDU   that solicits an immediate response  (see 26.4.4.5 (Responding to an HE  TB PPDU with an SU PPDU)),   * or an HE or EHT PPDU that carries   a multi-TID A-MPDU or ackenabled  multi-TID A-MPDU (see  26.6.3 (Multi-TID AMPDU and ackenabled  single-TID AMPDU)).,   * or if any preceding PPDU in the   TXOP carried a BSRP Trigger frame  addressing a STA that is operating  with (#3071) DUO mode (see 37.12.2  (Dynamic Unavailability Operation  (DUO) mode)) |
| **…** | **…** |

***TGbn editor: Please modify the subclause 37.10.1 (Dynamic Power save (DPS) operation) as follows***

**37.10.1 Dynamic power save (DPS) operation**

A DPS assisting STA shall solicit the transition of the peer DPS STA to HC mode by sending an initial(#3026)

Control frame, which is transmitted in non-HT (duplicate) PPDU using a rate of 6 Mb/s, 12 Mb/s, or 24 Mb/

s [TBD]. The initial(#3026) Control frame addressed to the DPS STA shall include an intermediate FCS field if the

DPS STA has indicated a non zero DPS padding delay and shall include sufficient padding to ensure that the

padding requirement(s) of the DPS STA(s) that are addressed by that ICF are satisfied as defined in 37.15

(Padding for an initial(#3026) Control frame). It is TBD whether a DPS assisting STA shall initiate any frame

exchange with a DPS STA by sending an ICF or only some frame exchanges.

***TGbn editor: Please modify the subclause 37.11 Non-primary channel access (NPCA) mode as follows***

**37.11 Non-primary channel access (NPCA)**

6) The STA shall begin all frame exchanges on the NPCA primary channel with an NPCA initial(#3026)

Control frame using non-HT PPDU or non-HT duplicate PPDU format using a rate of 6 Mb/s,

12 Mb/s, or 24 Mb/s.

***TGbn editor: Please modify the subclause 37.11.2 Dynamic Unavailability Operaiton (DUO) mode as follows***

**37.12.2 Dynamic Unavailability Operation (DUO) mode**

To enable DUO mode with its associated DUO Supporting AP:

* The DUO non-AP STA shall transmit to the AP an TBD Request frame (TBD) with the DUO Mode

subfield in the frame set to 1

* The AP shall transmit an TBD Response frame, after the AP is ready to serve the non-AP STA in

DUO operation, as a response to the received TBD Request frame, to the non-AP STA.

* It is TBD whether the AP can reject the request to enable (#3071) DUO mode at the STA side and the

enablement procedure is TBD.

To disable DUO mode with its associated DUO Supporting AP:

* The DUO non-AP STA shall transmit a TBD Request frame with the DUO Mode subfield in the

frame set to 0 to the AP.

* The associated AP shall transmit a TBD Response frame, after the AP is no longer serving the non-

AP STA in (#3071) DUO mode, as a response to the received TBD Request frame, to the non-AP STA.

When a DUO non-AP STA is operating in (#3071) DUO mode, then:

* The associated AP that initiates frame exchanges that are neither group addressed Data nor group

addressed Management frames with the non-AP STA shall begin the frame exchanges by transmitting

an initial(#3026) Control frame (ICF) allowed for DUO mode to the non-AP STA.

* The ICF allowed for DUO shall be a BSRP Trigger frame that has either:
  + A User Info field with the AID12 field set to the AID of the STA, and with the GI And HE/

UHR-LTF Type field set to 3 to solicit a non-HT (duplicate) PPDU.

* + A User Info field with the AID12 field set to the AID of the STA, and with the GI And HE/

UHR-LTF Type field not set to 3 to solicit a TB PPDU.

* The BSRP Trigger frame shall have the UL Length field set to a value that is sufficiently large to

allow the STA to include in the PPDU that is sent in response an initial control response frame (ICR)

that can include unavailability information.

* The ICR frame that is allowed for DUO to include the unavailability information is a Multi-STA

BlockAck frame.

A DUO non-AP STA that is operating in (#3071) DUO mode that receives a BSRP Trigger frame from its

associated DUO Supporting AP

* that contains the 12 LSBs of the non-AP STA's AID in any of the User Info fields
* and that solicits a response in TB PPDU format

shall respond following the rules defined in 26.5.5 (Buffer status report operation), except that the DUP non-

AP STA may also aggregate a Multi-STA BlockAck frame along with the one or more QoS Null frames that

are required according to 26.5.5 (Buffer status report operation).

A DUO non-AP STA that is operating in (#3071) DUO mode and that receives, from its associated DUO

Supporting AP, a BSRP Trigger frame that is individually addressed to the STA and solicits a response in

non-HT (duplicate) PPDU format shall respond subject to the rules defined in 26.5.2.5 UL MU CS

mechanism, and the response shall be in non-HT (duplicate) PPDU format and shall include a Multi-STA

BlockAck frame.

A DUO non-AP STA that is operating in (#3071) DUO mode and that is a TXOP responder may indicate, in a

response Multi-STA BlockAck frame, whether the non-AP STA will be unavailable after a specific point in

time and, if known, for how long, by including a Per-AID TID Info field that contains an Unavailability

Target Start Time and Unavailability Duration (see 9.3.1.8.6 (Multi-STA BlockAck variant)).

A DUO non-AP STA that is operating in (#3071) DUO mode and that is a TXOP holder may indicate in a BSRP

Trigger frame whether the non-AP STA will be unavailable after a specific point in time, and, if known, for

how long, by including a TBD User Info field that contains an Unavailability Target Start Time and

Unavailability Duration (see 9.3.1.22 (Trigger frame format)). The DUO non-AP STA may transmit this

BSRP Trigger frame only if certain TBD conditions are true. The response frame to such a BSRP Trigger

frame is a Multi-STA BlockAck frame in non-HT (duplicate) PPDU format.

When a DUO Supporting AP receives from a DUO non-AP STA operating in (#3071) DUO mode a Multi-STA

BlockAck frame addressed to the AP, in response to a preceding BSRP Trigger frame, that includes an

Unavailability Target Start Time field, the UHR AP shall consider the STA as being unavailable:

— from the future target time indicated in the Unavailability Target Start Time field,

— for a duration indicated in the Unavailability Duration field, if the unavailability duration is known,

and until TBD (referring to the conditions for the STA to become available again) if the unavailability

duration is unknown

***TGbn editor: Please modify the subclause 37.14 as follows***

**37.14 Enhanced multi-link single-radio (EMLSR) operation for a UHR non-AP MLD**

If a UHR non-AP MLD operates in the EMLSR mode and is associated to a UHR AP MLD, then:

* the UHR AP MLD shall include an intermediate FCS in the initial(#3026) Control frame on an eMLSR link,

if needed by the non-AP MLD.

* The AP affiliated with the AP MLD shall set the length of the Padding field of the initial(#3026) Control

frame based on the rules defined in 37.15 (Padding for an initial(#3026) Control frame) when the intermediate

FCS field is present),.

***TGbn editor: Please modify the subclause 37.15 as follows***

**37.15 Padding for an initial**(#3026)  **Control frame**

[TBD] If an intermediate FCS and padding are required, then a UHR STA affiliated with an MLD shall set

the length of the Padding field of a Trigger frame, that is an initial(#3026) Control frame, based on the rules defined

in 35.5.2.2.3 (Padding for a Trigger frame), with the following superseding requirements:

* If a DPS STA is an intended receiver of the Trigger frame and the value in the DPS Padding Delay

field received from the DPS STA is more than MinTrigProcTime, then the MinTrigProcTime is

replaced by the value in the DPS Padding Delay field, and the last bit of the field that contains the

intermediate FCS is at least LPAD, MAC, defined in Equation (35-1), where EMLSR\_PADDING\_

DELAY is replaced by the value of the DPS Padding Delay field received from the DPS

STA.