IEEE P802.11
Wireless LANs

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| Proposed resolution to CID2466 |
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Abstract

This submission proposes a resolution to CID2466.

The discussion is in reference to Draft P802.11REVmc\_D2.0.

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| 2466 | 1624.35 | 10.33.2.2 | What does this text mean? "all the streams within the Switching Stream element that have the LLT Type field set to 1 shall be switched using the Stream-based Link Loss Countdown," - it sounds like it is saying that the session transfer will take place based on the LLC timer, but nowhere does it really say this - nowhere does it say, make the transition when the counter reaches zero, and furthermore, the counter counts down as long as no frame is received - what if a frame is received? Then the counter will be reloaded and so, if frames keep arriving for this stream, the stream will never transition! Is the intention that the source of the frames of the stream will stop sending the frames and this will cause the timer to reach 0? If so, this is very implicit and should be stated more clearly - and it is completely unclear which entity in the system will perform the gating to stop letting frames from this stream pass out to the network. I suspect that the entity that would do this is actually not a part of the 802.11 system, but some entity above 802.11 - in which case, it would still be nice to have some statement in here pointing to that fact. | Clarify just exactly how this counter is used to make a transition despite the possible reloads. |

**Proposed resolution: Reject.**

**Discussion 1**

*“What does this text mean? "all the streams within the Switching Stream element that have the LLT Type field set to 1 shall be switched using the Stream-based Link Loss Countdown," - it sounds like it is saying that the session transfer will take place based on the LLC timer, but nowhere does it really say this - nowhere does it say, make the transition when the counter reaches zero”*

The paragraph below in P1624L45-47 states “The FST transition for the STA, if STA-based, or the stream, if stream-based, from the Setup Completion state to the Transition Done state shall occur immediately after the corresponding Link Loss countdown timer transitions from 1 to 0 within any of the initiator or responder of the FST session.”

Therefore, there is already a rule to state that the transition happens when the counter reaches zero.

**Discussion 2**

“*, and furthermore, the counter counts down as long as no frame is received - what if a frame is received? Then the counter will be reloaded and so, if frames keep arriving for this stream, the stream will never transition! Is the intention that the source of the frames of the stream will stop sending the frames and this will cause the timer to reach 0? If so, this is very implicit and should be stated more clearly*”

Section 10.33.2.2 specifies that there are two possible ways to perform FST and transition sessions:

1. Using a timer-based approach through the LLT timer: P1624L25-28
2. Using FST Setup Request/Response frame exchange in which there is no timer, but instead is based on an explicit frame exchange: P1624L30 and a few paragraphs after that

The text being alluded to by the commenter explains the behavior for case (1). In such case, the intended behavior is precisely only to perform FST if the timer expires, which is an indication of link breakage. This is the reason why the timer is reloaded after a frame is received. If the link never breaks and frames are received before the timer expires, then the FST should never be performed. So, the behavior is correct as specified and the text seems to fully describe such behavior.

**Discussion 3**

“*and it is completely unclear which entity in the system will perform the gating to stop letting frames from this stream pass out to the network. I suspect that the entity that would do this is actually not a part of the 802.11 system, but some entity above 802.11 - in which case, it would still be nice to have some statement in here pointing to that fact.*”

I believe there is some misunderstanding here. There is no such “gating” entity. For the timer-based approach, the reason why frames are not successfully received is primarily due to link breakage, which could be something that happens more frequently in 60 GHz than in lower bands. As such, this special provision is made to ensure a timely transition to lower bands.