IEEE P802.15  
Wireless Personal Area Networks

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| CID 20 | | | | |
| Date: May 1, 2024 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Jinjing Jiang | Apple Inc. |  |  | jinjing @ apple.com |
| Alex Krebs | Apple Inc. |  |  | a\_krebs @ apple.com |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Abstract

This document discusses and proposes resolutions for CID 20.

The discussion and proposed changes are based P802.15.4ab™/C (pre-ballot) Draft Standard for Low-Rate Wireless Networks.

Revision history:

R0 – Initial version

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Page** | **Line** | **Comment** | **Proposed Change** | **Proposed resolution** |
| 20 | 61 | 1 | for contention-based ranging it is like slotted aloha, there should be some requirements for the responder to determine the access probability based on the number of remaining responders | add some requirements for responder to determine access probability, or add signaling for initiator to control the collision probability | Reject the comment and add some description text. |

## CIDs 20

During contention-based ranging, it works as the following. Based on the one-to-many Poll compact frame sent by the initiator, the responder will choose a random number *n* ∈ [0, Number of Sub-rounds) and participate in Sub-round *n* only. In addition, it might be impossible for the initiator to control the collision probability, which depends on the number of potential responders.

Add the following text at the beginning of Section 10.38.9.2.

During contention-based ranging, the Ranging Initiation Message sent by the initiator determines the number of sub-rounds and the number of slots for each sub-round. Upon receiving the Ranging Initiation Message, the Responder chooses a random number *n* *∈* *{0,1,2,…,Number of Sub-rounds-1)* and participate in the *n*th Sub-round only.