IEEE P802.15  
Wireless Personal Area Networks

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| CID 20 | | | | |
| Date: May 1, 2024 | | | | |
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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

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| --- | --- | --- | --- | --- | --- |
| **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 | Revise (as per below) |

## CIDs 20

Discussion: 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-1] 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.

Instruction to the editor: 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 should pick a random number *n* ∈ [0, ..., Number of sub-rounds-1] and participate in the *n*th sub-round only.