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Proposed Remedy for Comment 127

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1. Motivation

This contribution contains the proposed remedy to resolve comment 127

2. Proposed Text Changes

[***Add the following to the end of Subclause 6.3.2.3.6***]

The following TLV parameters may be included in an unsolicited RNG-RSP message.

Rendezvous time
This is offset, measured in units of frame duration, when the BS expected to provide non-contention-based ranging opportunity for the MS. The offset is calculated from the frame where RNG-RSP message is transmitted. The BS is expected to provide non-contention-based ranging opportunity at the frame specified by the rendezvous time parameter.

CDMA code
A unique code assigned to the MS, to be used for dedicated ranging. The code is from the initial ranging codeset.

Transmission Opportunity Offset
A unique transmission opportunity assigned to the MS, to be used for dedicated ranging in units of symbol duration.

[***Modify Subclause 6.3.10.3.4 as follow***]

6.3.10.3.4 Dedicated ranging and automatic adjustments

A dedicated ranging is an optional initial ranging which can be used to expedite ranging process when the ranging is performed as an initial step of a certain procedure such as location determination, coordinated association during scanning, location update in idle mode, etc. For a dedicated ranging, BS will provide dedicated ranging information and allocate the dedicated ranging region at a pre-defined "rendezvous time", in terms of relative frame number. The BS will also assign:

• A unique code number (from within the initial ranging codeset)
• A transmission opportunity within the allocated region (in terms of offset from the start of the region)

The BS may assign the same code or transmission opportunity to more than one MS, but not both. In case all allocated transmission opportunities in current region are different, there is no potential for collision of transmissions from different MSs. In case the BS allocates the same transmission opportunity to several MSs, there is some probability of collision and then BS may fail to identify transmitted codes.

The BS will provide the dedicated ranging information via MAC management messages which are different according to the procedures for which the dedicated ranging is used.

When the "Dedicated ranging indicator" is set to 1, the ranging region will be allocated via UIUC=12 in the UL-MAP.

When "Dedicated ranging indicator" is set to 1, then the ranging region and ranging method defined could be used for the purpose of ranging using dedicated CDMA code and transmit opportunity assigned in the unsolicited RNG-RSP message (for location determination of MS), the MOB_PAG-ADV message (for location update in idle mode) or in the MOB_SCN-RSP message (for coordinated association).

MSs registered to this BS are prohibited from use of the named ranging region.

Upon receiving one of aforementioned messages which include the dedicated ranging information, the MS should interpret the provided rendezvous time, dedicated code, and transmission opportunity as follows:

•"Rendezvous time" specified the frame in which the BS will transmit a UL-MAP containing the definition of the dedicated ranging region where the MS can use the assigned CDMA ranging code. "Rendezvous time" is provided in units of frames, beginning at the frame where the MAC management message which includes the dedicated ranging information is transmitted.
•The MS shall read the UL-MAP transmitted at the first frame immediately following the rendezvous time and extract the description of the dedicated ranging region (ranging region with "Dedicated ranging indicator" bit set to 1). The MS shall determine the specific region it should use for transmission of the dedicated CDMA code by applying the offset defined by the "transmission opportunity offset" field in the management message, which was received from the BS, to the dedicated ranging region definition in the UL-MAP of the BS. In case the BS decides to provide a regular (non-dedicated) ranging region with "Dedicated ranging indicator" set to 0, the MS may transmit the allocated CDMA code in the regular ranging region.
•If the MS could not obtain UL-MAP at the first frame immediately following the rendezvous time, it shall abort the dedicated ranging process. The MS may perform a contention-based ranging process as described in 6.3.10.3.1.