IEEE P802.11
Wireless LANs

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| LB174 Guard Time-CID2293-CID2298 |
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Abstract

This document proposes resoltions to CIDs 2293, 2298 on Guard-Time from LB174 on Draft 2.0 of TGad. For clarity, the proposed changes are based on the most recent Draft 2.0 of TGad.

All resolution are based on the text in D2.0

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| 2293,2298  | 207 | 10 | T | The formula might not be correct | The formular uses DriftInterval, which can span more than one BI, to multiply (MLBAllocation\_i + MLBAllocation\_i+1 + 2), which could be 2xdot11MaxLostBeacons+2. The maximum amount of clock drift should be just [DriftInterval(i)+DriftInterval(i+1)]x[ClockAccuracy(ppm) × 10-6]. |

**Proposed Changes:**

*Modify P207L5-L23 in 9.23.6.4 as shown:*

The PCP/AP inserts a sufficient guard time between adjacent allocations to ensure that transmissions in adjacent allocations do not overlap in time. For each of the adjacent allocations, guard times are calculated based on the worst case drift and the maximum allowed number of lost DBand Beacons. The PCP/AP shall insert a guard time between adjacent allocations that is not shorter than:

GuardTime = ceiling((MLBAllocation\_i + 1~~MLBAllocation\_i+1 + 2~~) × ([ClockAccuracy(ppm) × 10-6] × DriftIntervalAllocation\_i)+ (MLBAllocation\_i+1 + 1) × ([ClockAccuracy(ppm) × 10-6] × DriftIntervalAllocation\_i+1) + SIFS + aAirPropagationTime, aTSFResolution)

where

The value of *MLBAllocation\_i,* (and *MLBAllocation\_i+1*)depends on whether the allocation is pseudo-static or not. *MLBAllocation\_i* (and *MLBAllocation\_i+1*)is zero for a non pseudo-static allocation and is equal to dot11MaxLostBeacons if the allocation is pseudo-static.

*ClockAccuracy* is equal to aClockAccuracy.

*DriftIntervalAllocation\_i* (and *DriftIntervalAllocation\_i+1*)is the time elapsed since a synchronizing reference event and is not greater than the Beacon Interval duration. The synchronizing event is the reception of the Timestamp field from the PCP/AP. For a pseudo-static allocation, *DriftIntervalAllocation\_i* (and *DriftIntervalAllocation\_i+1*) is equal to the Beacon Interval duration.

*aAirPropagationTime* accounts for the propagation delay between the STAs participating in the adjacent allocations.

*aTSFResolution* is the resolution of the TSF timer (11.39 DBand MAC sublayer parameters).

Proposed Resolution: **Agree**.

**Discussion:**

For pseudo-static allocation, the worst case clock offset is the maximum time elapsed times the clock accuracy:

(dot11MaxLostBeacons+1)x[ClockAccuracy(ppm)×10-6]×Beacon Interval

For non-pseudo-static allocation, the worst case clock offset is the DriftInterval times the clock accuracy:

[ClockAccuracy(ppm)×10-6]×*DriftInterval*

The worst case clock offset between allocaition i and allocation i+1 is

MLBAllocation\_i +1)×([ClockAccuracy(ppm)×10-6]×DriftIntervalAllocation\_i)+(MLBAllocation\_i+1 +1)×([ClockAccuracy(ppm)×10-6] × DriftIntervalAllocation\_i+1)