

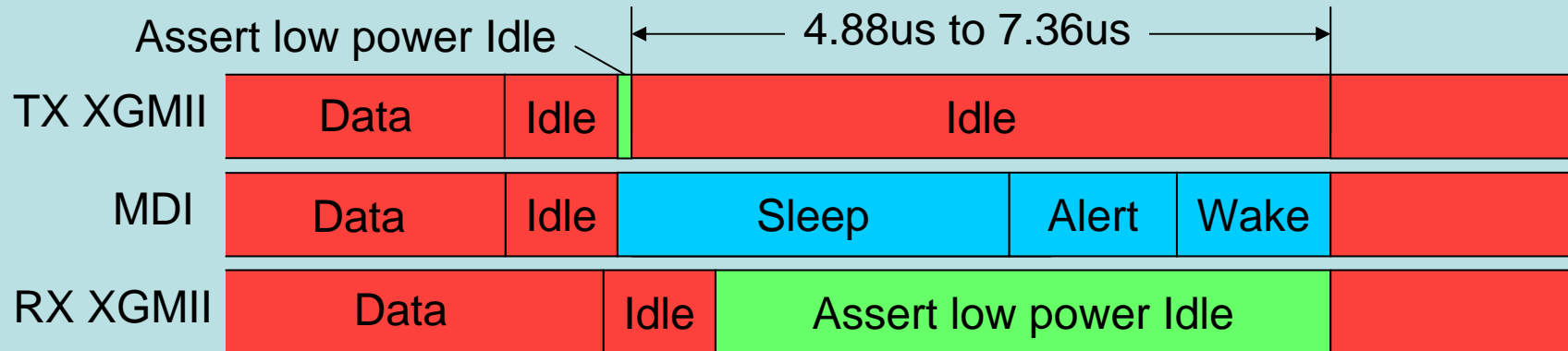
Two TX wait timers in RS for 10GBASE-T operation

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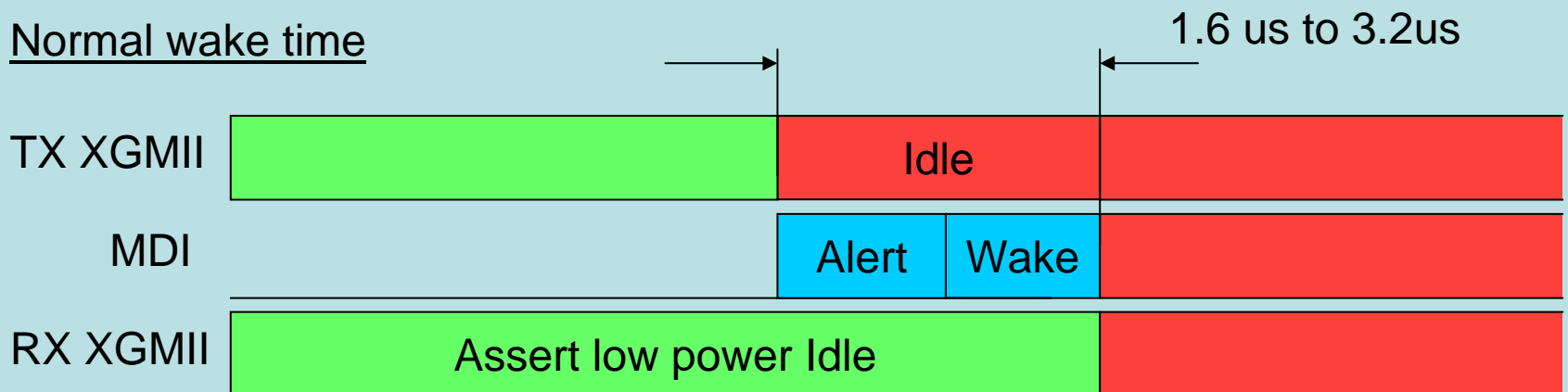
Worst case and 'normal' wake times

Worst case wake time



From: EEE P802.3az/D1.0 Clause 55 PHY Wake Time, Mike Grimwood, Broadcom
http://www.ieee802.org/3/az/public/nov08/grimwood_03_1108.pdf

Normal wake time



Note - Media propagation delay and wake shrinkage not shown

Observations and proposal

- Worst case TX wake time about double normal
 - Only occurs after very short LPI request from system
- The RS has to enforces the worst case wake time
 - If not data transmission might start before the PHY is ready
- Only required after short LPI
 - Unnecessary to always impose it
- Two TX wait timers in RS in baselin
 - First starts on entry to LPI to enforce worse case wake time
 - Cover the case of a very short LPI
 - Only enabled when PHY type is 10GBASE-T
 - No impact on other 10Gb/s PHYs
 - Second stars on exit from LPI to enforce normal wake time
 - Covers the case of longer LPI
 - Both times have to expire before TX time considered compete

Operation of TX wait timers in RS

