

**Project: IEEE P802.15 WG for Wireless Personal Area Networks (WPANs)**

**Submission Title:** [Resolutions to MR-FSK Comments on Frequency Hopping]

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**Abstract:** [This document addresses frequency hopping comments submitted against LB51 (802.15.4g)]

**Purpose:** [802.15.4g Comment Resolution for LB51.]

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# Frequency Hopping Related Comments

- Comments to be resolved:
  - CID# 1536, 1637, 1799, 1804, 1805, 1806, 1808, 1814, 1815, 1816
- Summary of comments:
  - MAC support for channel hopping in non-beacon enabled PANs is needed, w/o dependence on global synchronization.
  - The mandatory mode defined in 6.12a (MR-FSK) will require the use of frequency hopping, due to some local regulations (cf clause G.1.2.4, section 15.247 of FCC)
  - With the addition of PHY modes that require frequency hopping spreading, mechanisms need to be added to the standard to define network operation with the constraints of a frequency hopping PHY. Several existing mechanisms (channel scans, etc) are based on PHYs that operate on a single channel for any given period of time.
  - There is no specification about frequency hopping.

# Frequency Hopping Status

- Frequency hopping concerns and proposed resolutions were presented in the following documents:
  - 15-10-0476-01-004g
  - 15-10-0258-02-004g
- 4e is working to add frequency hopping mechanisms to the Enhanced Beacon (EB) and Enhanced Beacon Request (EBR)
  - The frequency hopping comments submitted against LB51 can be closed with the following resolution:  
“TG4e is adding mechanisms to support frequency hopping and these mechanisms will be reflected in their next draft.”
- There is still work to be done to define how the common signaling mode uses these mechanisms
  - Comments are expected in the next TG4g letter ballot

# Frequency Hopping Comment Resolution

- Comments to be resolved:
  - CID# 1536, 1637, 1799, 1804, 1805, 1806, 1808, 1814, 1815, 1816
- Resolution: Accept in Principle
- Resolution Detail:

We are expecting TG4e to add mechanisms supporting frequency hopping and these mechanisms will be reflected in the next TG4e draft. At this time, no change is required to the TG4g draft.

# Questions or Comments?