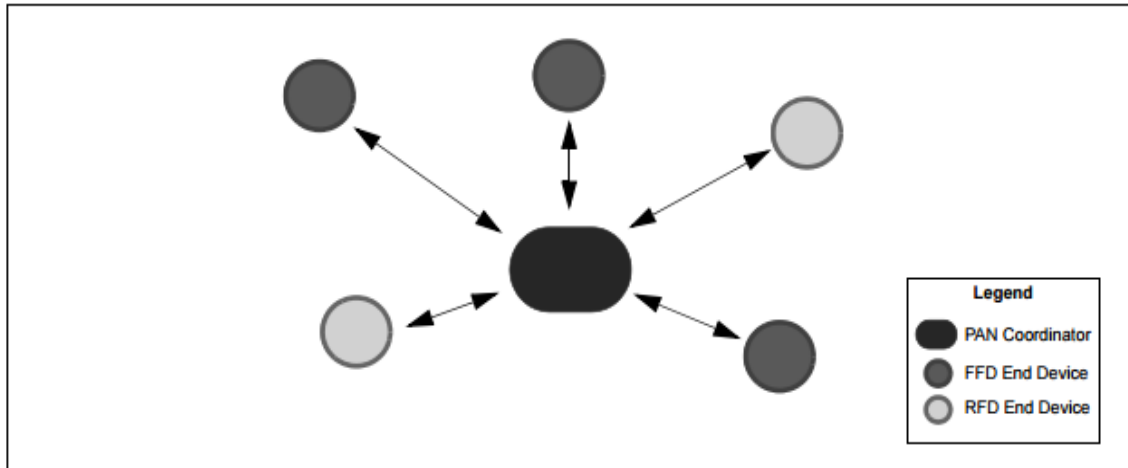# MiWi P2P Release Notes

Below are the list of features that are new and or improved in the Beta version of the MiWi P2P protocol stack.

1. **One Stack – 2 Configurations**
   a. The MiWi P2P protocol stack has been upgraded and a new topology has been added that is called STAR topology.   The traditional P2P topology remains as the default, and the new STAR topology is available via a compiler option. In the STAR topology, all the devices join a central PAN Coordinator, and all messages are routed through the PAN Coordinator, for a maximum of 2 hops.   In the STAR topology the network range is extended up to 2 radio-range in distance,.

FIGURE 1:   STAR NETWORK CONFIGURATION

Legend
- PAN Coordinator
- FFD End Device
- RFD End Device

2. **A Link Status Command Added to Stack:**
   a. A Link Status command is added to the stack. Its purpose is to provide of means for the PAN Coordinator to monitor the status of the network.   By default, each End Node, sends a Link Status message to the PAN Coordinator every 15 seconds, indicating its alive and communicating on the network.   The frequency of the Link Status message is a compiler option,

3. **A Network Leave Command Added to Stack**
   a. A Network Leave Command has been added to the stack.   Devices voluntarily or involuntarily leaving the network shall broadcast this message prior to leaving the network.   Other network devices receiving the Leave Command use it to update their Connection Table.

4. The Periodic Broadcast of Connection Table
   a. PAN Coordinator periodically broadcasts the Connection Table to all nodes in the network.   This feature is added so that all FFD is made aware of all the other devices that have joined or have left the network.

5. MiAPP API Expansion:
   a. The *MiApp_UnicastStar* API has been added to the Application Layer suite of interface functions.   Its purpose is to send a message from source End Node to Destination End Node in a STAR network.