

**Project Title:**

**Utilize the deprecated bytes in the WiFi Beacon message as a method of propagating messages in a peer to peer mesh.**

**Proposed by:** Dan Cregg (dcregg@insteon.com)

**Learning Objectives:**

1. Study:
  - a. Electronic and communication systems
  - b. Electromagnetic propagation principles
  - c. Deep WiFi packet structure
  - d. Interconnected device requirements, protocol structures and conversions
2. Analysis:
  - a. The ability to determine utilization of unused byte space in the WiFi protocol.
3. Implementation:
  - a. Create an IoT / Smarthome protocol leveraging a mesh, peer to peer method within existing WiFi networks.

**Design tool used (include but are not limited to):**

- Python
- Ethereal and Wireshark
- C
- Other tools TBD

**Project Diagram:**

TBD