AP Power Saving

Date: January 14, 2011

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Objective

- **This contribution proposes use cases following the IEEE 802.11ah Call for Proposals [1].**
- **This contribution discusses the need for Access Point (AP) electric power saving features related to IEEE 802.11ah use cases.**
- **AP electric power saving features can be realized by providing/using enhanced sleep functions.**

Motivation

- **There is a demand/market for power saving APs**
  - APs with proprietary power saving features are on the market.
  - No standardized AP power saving procedure
    - Switching AP on/off
    - Switching WiFi (radio) on/off
    - Re-association
- **IEEE 802.11v [2] will have some (generic) power saving features**
  - BSS Termination, WNM-Sleep Mode for non-AP STAs
  - Smart?
  - Re-association?
- **AP power saving is needed for IEEE 802.11ah**

Discussion

- **IEEE 802.11ah Use Cases show a significant large number of APs [3]**
  - Smart grid
  - Intelligent Transport Systems
  - Surveillance
- **There is a demand for AP power saving features to reduce power consumption**
  - Outdoor APs
  - Home Network APs
  - Mobile APs
- **AP power saving features will increase the user acceptance of IEEE 802.11ah (green IT).**

Proposal

- **Include AP power saving features in IEEE 802.11ah**
  - AP power saving
  - AP awake/sleep transition
  - Wake-up
  - Re-association
- **Detailed proposal in March**

References

[1] IEEE P802.11 Wireless LANs, IEEE 802.11ah Call for proposals, IEEE 802.11-10/1373r0, 11.11.2010

[2] IEEE 802.11v Task Group

[3] IEEE P802.11 Wireless LANs, Proposed IEEE 802.11ah Use Cases, IEEE 802.11-11/0017r0

Acknowledgement

This contribution was funded in part by a grant from the Promotion program for Reducing global Environmental loaD through ICT innovation (PREDICT) led by the Ministry of Internal Affairs and Communications, Japan.