**IEEE P802.24**

**Vertical Applications TAG**

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| Project | IEEE P802.24 Vertical Applications Technical Advisory Group | |
| Title | Smart Grid Task Group – Cellular Comparison White Paper | |
| Date Submitted | 18 May 2016 | |
| Source | Tim Godfrey | Voice: 913.706.37777 E-mail: |
| Re: | White Paper Development | |
| Abstract | Outline for the TG’s Cellular Comparison White Paper | |
| Purpose | Provide a framework for developing the Cellular Comparison White Paper | |
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# General Guidelines for White Paper

White paper on NB-LTE, Cellular IoT, LTE-U vs IEEE 802 standards in smart grid applications.

* Technical comparisons
* Potential coexistence issues

White paper doesn’t try to make a recommendation or judgement, but provides facts

Targeted towards vendors and user of the standards

Consider industrial automation as a target audience – they are also considering 3G, 4G, and 5G options.

# White Paper Outline

Types of applications that are considered in the white paper

Survey of existing and emerging technologies used by cellular operators

3G, 4G, 5G (broadband and C-IoT and NB-LTE variants, LAA, LTE-U)

Understand how new technologies focused on IoT are differentiated and how they relate to 802 standards

Survey of IEEE 802 wireless technologies used for grid applications

802.11, 802.15, 802.16, 802.22

Refer to existing white paper, and PAP2

Matrices of differences (maybe, but not exclusively pros and cons)

Data volume

Security considerations (link vs application layer)

Do we have sufficient information on commercial cellular security?

Reliability and availability

Availability of SLAs, QoS, and other service level considerations

Management and metrics

Provisioning and device deployment

Operational expense vs capital expense considerations

Unlicensed vs licensed spectrum

Potential coexistence issues

Further explanation and notes on matrix