**IEEE 802.24**

**Smart Grid TAG**

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| Project | IEEE 802.24 Smart Grid TAG |
| Title |  |
| Date Submitted | [5 February 2013] |
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| Re: | [] |
| Abstract | [DRAFT DOCUMENT: Not approved by IEEE 802.24. This document comments on the SGIP PAP02 network model tool.] |
| Purpose | [] |
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 James Gilb

 IEEE 802.24 Smart Grid TAG Chair

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Dear <contact name>

This document solely represents the views of IEEE 802.24 and does not necessarily represent a position of r the IEEE, the IEEE Standards Association, or IEEE 802.

The 802.24 working group, in charge of reviewing and promoting 802 standards of interest for Smart Grid applications and interoperability reviewed the SGIP PAP02 network model tool identified as Frmwrk-Tool-Dtls-r0.7.xls<http://collaborate.nist.gov/twiki-sggrid/pub/SmartGrid/PAP02Wireless/Frmwrk-Tool-Dtls-r0.7.xls>.

The group concluded that the model is well adapted and valuable for the types of network topologies it describes, which is assumes an asymmetrical base-station to subscriber network structure, like those supported by 802.16 and Cellular technology.

The group also concluded that such model is not appropriate to the modeling of Point to Point (or Peer to Peer) applications or Mesh topologies.

The limitation for Point to Point applications is due to the fact that the modeling tool assumes base station to subscriber station architecture.

In the case of Mesh technologies the driving component in the sizing of the network is not range but rather connectivity among nodes, which is not represented in the model. Additionally, Mesh networks in most cases use frequency agility techniques which further complicates the problem as devices within a NAN would hop orthogonally on channels within the same spectrum thus making estimations on link bandwidth and throughput within such NAN virtually impossible to calculate. Also the typical location of nodes for the NAN mesh topology is that of the electricity meter, outside the premises and 4-5 feet above ground level, and the SGIP PAP02 model is currently not able to represent a symmetrical network of peers (equivalent nodes), in a heavily cluttered environment, with multiple potential communication paths between those nodes.

If you have any questions, please feel free to contact me at gilb@ieee.org. Thank you for the opportunity to provide feedback on the SGIP PAP02 network model tool.

Sincerely,

James Gilb

IEEE 802.24 Smart Grid TAG Chair