

**Subject:** Statement on IEEE 802.16 Activity regarding Small Cell Backhaul

**Date:** 29 October 2012 10:16:21 AM MDT

**To:** <r.b.marks@ieee.org>

Dear Roger

On behalf of the Small Cell Forum (SCF) and the backhaul Special Interest Group (SIG), thank you for your invitation to liaise with IEEE 802.16 working group on Broadband Wireless Access. The SCF responded to the increasing deployment scenarios and vendor activity within the small cell domain by renaming and rebranding itself in March 2012. The domain of the SCF now includes indoor residential, indoor enterprise as well as outdoor small cell deployments. One of the key challenges identified by operators for outdoor small cells is defining backhaul solutions that are both technically and economically feasible. The backhaul SIG within the SCF was set up specifically in December 2011 to bring together interested parties in both operator and vendor community to analyse and provide some recommendations for the complex problems that arise in that space.

The SIG is working towards a white paper to be published early in 2013. The scope of the activity within the backhaul SIG are:

- To appreciate the portfolio of solutions available for backhauling small cells that will be dependent on various deployment scenarios.
- To categorise different deployment scenarios into a limited number of use cases. (e.g. capacity hotspot, indoor coverage etc.)
- Estimate the scale of deployment and then determine the backhaul requirements profile for each use case. (backhaul capacity, latency etc.)
- Analyse backhaul solutions and map them against each use case requirement profile.
- Provide recommendations and point out challenges for each use case on use of backhaul solutions.

We are in the process of analysing both wired and wireless backhaul systems that are applicable for small cells. In this regard, our work spans from Non Line of sight (NLOS) systems to E-band Line of Sight (LOS) in the wireless domain as well as fibre to xDSL in the wired domain.

We will analyse all these systems under common requirement profiles to derive some recommendations.

The work proposed by IEEE 802.16 is very timely and I see great synergy with SCF backhaul SIG. In general, SCF does not issue standard documentations to the industry but more often provides recommendations and guidelines for standards that are fed to other fora, such as 3GPP and WiFi Alliance.

The SCF will be in a position to provide very valuable contributions to your work item based on the conclusions we make on wireless backhaul systems early in 2013.

I would welcome the opportunity to contribute our conclusions and recommendations via our common membership.

We would like to nominate Paul Trubridge as our interface to your working group.

Best regards

Gordon

Gordon Mansfield  
Small Cell Forum Chair