New HGI requirements will strengthen performance of Wi-Fi

Issues around Automatic Channel Selection technology and Wi-Fi repeaters are addressed

1 September 2015. HGI, the leading global organisation for setting requirements for the connected home, today announced it has published new requirements that when implemented will improve the reliability and range of Wi-Fi networks for services operating on both 2.4Ghz and 5Ghz frequencies.

The new document, ‘RD-045: Wi-Fi requirements for Home Gateways - Automatic Channel Selection (ACS) and Repeaters’, improves the clarity of ACS requirements. ACS technology features vendor-specific aspects, meaning the function’s performance can vary between different implementations. HGI’s new requirements for the Home Gateway aim to make ACS implementations more consistent and effective in selecting the appropriate Wi-Fi channels in the 2.4Ghz and 5Ghz bands. Interference is another issue discussed.

The second challenge addressed by these requirements is how to extend the coverage of Wi-Fi networks without cabling.

“This is typically done with Wi-Fi repeaters but today’s devices are either not certified or are Wi-Fi certified as Access Points (APs),” said HGI’s Chief Technology and Business Officer Duncan Bees. “As multiple options exist for implementing Wi-Fi repeaters, the end-user experience can vary between different devices. HGI’s aim was to write down the core high-level requirements that when implemented will ensure a consistent user experience with repeaters.”

In order to produce the requirements, HGI undertook an examination of ACS technology operating on the Home Gateway, including Wi-Fi/non-Wi-Fi interference issues. Under HGI’s new ACS requirements, each Wi-Fi AP with ACS must implement an ACS mechanism for each supported frequency band. When and how often the ACS solution should run is also covered by the requirements, in addition to regulating the monitoring of background noise.

Additionally, Wi-Fi repeaters must: support WPS push button for association with the primary AP; be able to extend all the announced AP WLANs on its supported bands when using the WPS procedure; and, after WPS configuration, create a WLAN with the same SSID and security settings as the AP it is extending.

For more information on HGI please visit http://www.homegatewayinitiative.org/

Ends

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About HGI
HGI, founded in 2004 by nine telecom operators, is shaping the next generation of internet and voice services. Starting from use-cases and service needs, HGI sets requirements for Home Gateways, infrastructure devices and the Home Network. HGI represents the entire spectrum of players in the broadband home area and is committed to fulfilling its mission by mid-2016. For more information about HGI or to find out how to participate, email contact@homegatewayinitiative.org or visit our website: http://www.homegatewayinitiative.org/