



ANSI-ASC-C63[®] Interpretation Request Form

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Submission Date	Originator Name, Company
05/19/2017	David Knight, NPL Teddington (UK)

Standard	Clause/ Sub clause	Paragraph Figure/ Table	Type (General/ Technical/ Editorial)	Comment / Inquiry	Subcommittee Response <i>(to be filled in by Subcommittee Chair)</i>
C63.5 2017	4.4.3		Tech	<p>I understand the frequency is limited to 300 MHz to avoid the nulls in site response, using the previous static heights (2006). The 2017 version now requires a height scan for the Tx antenna, which to some extent negates the worry about site nulls.</p> <p>My question is this - to find potential symmetry problems with the AUC, i.e. the Rx antenna in this setup, should the AUC not be height scanned as it would during SSM calibration and use for emission testing?</p>	<p>In earlier versions of ANSI C63.5, the original setup was with both antennas fixed at 1 m. During the writing of the 2017 edition, it was decided to keep the AUC at a fixed 1 meter height and scan the transmit antenna because nulls can be realized due to the ground coupling to the antenna (elements connected to shield and center of the feed do not couple to the ground the same way). Once the antenna is high above ground, all antennas will appear to be symmetrical. The issue with the original method of both antennas being fixed at 1 meter is there could be a null at the AUC so symmetry is not truly known in this configuration.</p> <p>The new version is to keep the AUC low to the ground, so if there are problems with symmetry related to nulls which can be found at a fixed height, it will be detected and the transmit antenna is scanned to ensure that nulls are avoided.</p>