# ANSI-ASC-C63® Interpretation Request Form

This form shall be used for submission of Interpretation Requests related to ANSI-IEEE standards that are within the responsibility of ANSI-ASC-C63®. The eight parts of the form must be filled out completely, with the exception of the Subcommittee Response, to ensure expedient processing. This completed form is to be submitted to the Secretary of ANSI-ASC-C63® via e-mail.

| Submission Date | Originator Name, Company |
|---|---|
| 06/09/2020 | Carlos Juarez, Com-Power Corporation |

| Standard | Clause/ Sub clause | Paragraph Figure/ Table | Type (General/ Technical/ Editorial) | Comment / Inquiry | Subcommittee Response (to be filled in by Subcommittee Chair) |
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| C63.5 - 2017 | J.2.1.2(d) | | Technical | We are having trouble determining the size of the ground plane for our Antenna Calibration Site.<br><br>In the 2006 version of ANSI C63.5, there were seven specific requirements for a Standard Antenna Calibration Site (SACS). One of the requirements [H.2(3)] was that the size of "the ground plane shall be at least 20 meters wide by 30 meters long"; and another requirement [H.2(6)] stated that "the measuring instrumentation shall be located under the ground plane or at least 20 meters from every edge of the ground plane."<br><br>Now, in the 2017 version of ANSI C63.5, the SACS is now called an Antenna Calibration Site (ACS), and the two specific requirements mentioned above have been removed, and the only remaining size-related requirement that I see [J.2.1.2(d)] states that "the ground plane shall contain the Fresnel ellipse for the distance tested", with the Tx and Rx locations being the foci of the ellipse. This new requirement is not as well-defined as its predecessor, as there is no mention as to which (first, second, third, etc.) Fresnel ellipse they are referring. Table 1 of ANSI C63.7 (2005) indirectly defines the Fresnel ellipse for a 10 meter site with 2/4 meter antenna heights as having dimensions of 16.3m (major) AND 13m (minor). ANSI C63.7 and ANSI C63.4 both define the obstruction free area, also in the shape of an ellipse (but no mention of Fresnel) for a 10 meter site to be 20m by 17.3m.<br><br>Our take on this was to use the larger of the two sets of dimensions described above as the size of our ground plane.<br><br>Are we correct to say that if our Site is at least 20m by 17.3 m we should not having any issues with accreditation? | The specifics for a prescriptive size were removed from the 2017 edition to move the focus to be on meeting the requirements of J.2.1.3 and J.4. It is up to the designer of the site to determine specific site dimensions. The user of the ACS must be able to demonstrate that the site meets the requirements as covered in Annex J.<br><br>The sizes listed are guidelines and we reference the user to C63.7 Guide for Construction of Test Sites for Performing Radiated Emission Measurements. Table 1 in C63.7 presents only the (n=1) Fresnel zones for different configurations. These are based on analysis by Ed Bronaugh and others. In Bronaugh's paper he gives other boundaries for larger n values (Tx=2, Rx=4, sep=10m). Please note, the n=2 zone is roughly equivalent to the 20m × 17.3m dimension stated in original question. This is referenced in J.2.1.2(d).<br><br>Although the ground plane size is important, the most important requirement is that the site meet the performance criteria defined Annex J of C63.5.<br><br>It is not the intent of this standard to guarantee any accreditation acceptance based on the size of the site alone. |