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Requestor	Clause/ Subclause	Paragraph Figure/ Table	Type of comment (General/ Technical/Editorial)	COMMENTS	Proposed change	OBSERVATIONS OF ASC C63® on each comment submitted
	Annex D	Equation D.1	Technical	<p>The basic equations in C63.4-2009 for NSA still hold as it says to use the antenna factors as calibrated using C63.5-2006. The correction factor that is shown in C63.4 in Clause D.1 as a mutual coupling correction when using tuned dipoles is now changed to the GSCF using the tables in C63.5-2006 for biconical antennas or Annex H for other broadband antennas. Therefore, the correction factor for tuned dipoles table in C63.4 is NOT used anymore for broadband antennas. There is a statement in C63.4 that the correction is zero or close to zero for broadband antennas. This has to be amended.</p> <p>C63.4-2009 is still needed for NSA as it has the calculated NSA for a perfect test site over a semi-infinite conductive ground plane. <b>For the actual measurement of NSA, the equation in C63.4-2009 is sufficient with the changing of the correction factor “delta AFtot” to “GSCF” and then use the appropriate GSCF value as determined from C63.5-2006.</b></p>	<p><b>Change the correction factor “delta AFtot” in equation D.1 to “GSCF” and then add to the text in Clause D.2 after equation D.1 the statement: Use the appropriate GSCF value as determined from C63.5-2006.</b></p>	<p>Recommendation: Accept proposed change as shown.</p>

Requestor	Clause/ Subclause	Paragraph Figure/ Table	Type of comment (General/ Technical/Editorial)	COMMENTS	Proposed change	OBSERVATIONS OF ASC C63® on each comment submitted
	Annex D	Para immediately after equation D.2	Technical	<p>The correction factor for tuned dipoles table in C63.4-2009 is NOT used anymore for broadband antennas. Further there is a statement in C63.4 that the correction is zero or close to zero for broadband antennas.</p> <p>Via C63.5-2006, the correction factor which is now GSCF, is not zero for broadband antennas.</p>	<p><b>Remove the statement in C63.4-2009:</b> “The correction factor <math>\Delta AF_{TOT} = 0</math> for all other geometries and for broadband antennas in which mutual coupling effects are minimal”.</p> <p>Review this paragraph to ensure that any application of GSCF to tuned dipoles are clear in using the amended equation D.1 (as amended above).</p>	<p>Recommendation: Add sentence after equation D.1; For Roberts dipoles in Table D.4, <math>\Delta AF_{TOT} = \text{GSCF}</math>.</p>

The first change is in equation D.1 with the addition of two sentences, bottom of page 88:

These are used in Equation (D.1) for the measured NSA  $A_N$ :

$$A_N = V_{\text{Direct}} - V_{\text{Site}} - AF_T - AF_R - \text{GSCF}^{(1)} \Delta AF_{TOT} \quad (\text{D.1})$$

where

$AF_T$  is the antenna factor of transmitting antenna (dB/m)

$AF_R$  is the antenna factor of receiving antenna (dB/m)

~~$\Delta AF_{TOT}$  is the mutual impedance correction factor (dB)~~

GSCF is the correction factor for the applicable geometry.

<sup>(1)</sup>: Table D.4 is still appropriate for Robert’s (tuned resonant) dipoles, i.e.  $\text{GSCF} = \Delta AF_{TOT}$

Use the appropriate GSCF value as determined from C63.5-2006.

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The second change is in the paragraph after equation D.2, top of page 89:

The parameters  $AF_T$  and  $AF_R$  are determined as specified in ANSI C63.5. The mutual impedance correction factor of Table D.4 applies only to the recommended site geometry of 3 m separation, both horizontal and vertical polarization, with the use of resonant tuned dipoles. ~~The correction factor  $\Delta AF_{TOT} = 0$  for all other geometries and for broadband antennas in which mutual coupling effects are minimal.~~