

# A Comparison of Antenna Placement Algorithms

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# Equivalence of fitness to efficiency

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For a particular test case, fitness change of 0.01 is equivalent to either the corresponding value under expected gain ( $\mathbb{E}_g$ ) column, or difference in coupling ( $\Delta_c$ ).

ID	$\mathbb{E}_g$	$\Delta_c$ (dB)
tc1	872.277	0.5474
tc2	862.082	1.3034
tc3	861.845	1.5180
tc4	871.049	0.5693

$$\mathbb{E}_g = \frac{1}{N \cdot m} \sum_i^m F_{RP}(A_i), \text{ where } N = |\theta| \cdot |\phi|$$