



SDI Review Form 1.6

Journal Name:	British Journal of Applied Science & Technology
Manuscript Number:	2013_BJAST_6757
Title of the Manuscript:	Dipole-Loaded Monopole Optimized Using VSO
Type of the Article	Research Paper

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

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PART 1: Review Comments

	Reviewer's comment	Author's comment <i>(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
<u>Compulsory</u> REVISION comments		
<u>Minor</u> REVISION comments		
<u>Optional/General</u> comments	This paper titled as "Dipole-loaded monopole optimized using VSO" shows optimization method for uniform hemispherical coverage based on VSO. However, optimization with specific design objectives in a perfectly electrically conducting antenna at RF frequency range is already well established area. Additionally, the later part of this paper is focused on proving the performance of VSO based on several benchmarks, which dilutes the title. If the VSO is solid, the author(s) does(do) not need	The author thanks the reviewer for his helpful comments, and responds as follows: This paper introduces VSO as a simple, new, deterministic global search and optimization methodology, and demonstrates its efficacy in two ways: (1) solving a seminal antenna design problem, and (2) testing against recognized suites of benchmark functions and other algorithms. To the reviewer's point that antenna design with PEC elements is "well established," indeed the reviewer is correct, and this is precisely the reason why the dipole-loaded monopole problem was chosen to demonstrate VSO's performance. This problem is seminal in the field of antenna optimization. It was introduced by Altshuler (copy of his original paper attached), and it serves as a "real world" benchmark for testing a new optimization methodology such as VSO. The VSO paper thus solves the <i>very same</i> problem that Altshuler posed and solved using GA, nothing more, nothing less. But VSO solves the dipole-loaded monopole problem much more effectively, and that is the thrust of this



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	to describe this part. If the benchmark test is new and meaningful, then a separate paper is suggested.	paper. As to "dilution" by including a discussion of benchmark suites and other algorithms, the author respectfully disagrees, and believes that such a discussion not only is within scope, but indeed that it is essential. As an example of a parallel development, when CFO was introduced as a new methodology (http://www.jpier.org/PIER/pier77/33.07082403.Format0.pdf), a reviewer at MIT in Cambridge, Massachusetts, <i>required</i> that the paper be modified to <i>include</i> a discussion of benchmark testing, exactly the opposite of what the reviewer here suggests. As a further example, the paper that introduces HIGAPSO as an improved methodology for array pattern synthesis includes benchmark testing in precisely the same way it is included in this VSO paper (see "A Hybrid Optimization Algorithm and Its Application for Conformal Array Pattern Synthesis," W. T. Li et al., IEEE Trans. Ant. Prop., vol. 58, no. 10, Oct. 2010, at §D. Preliminary Numerical Experiments). In addition to these examples, the author believes that it is important for other researchers to be able to easily reproduce published results, and including benchmark testing for a <i>deterministic</i> algorithm such as VSO achieves this important goal. Thus, not only is there ample precedent for structuring the VSO paper as it is, that is, including benchmarks, the author believes that implementing the reviewer's suggestion would, in fact, diminish the paper's utility by depriving the reader of a specific numerical yardstick against which other work can be measured. The author feels that the reviewer's "dilution" concern has been fully addressed, and that no additional changes should be made in this regard.