



SDI Review Form 1.6

PART 1:

Journal Name:	<u>British Journal of Applied Science & Technology</u>
Manuscript Number:	2013_BJAST_5131
Title of the Manuscript:	OUTAGE ANALYSIS OF A MULTI-USER SPATIAL DIVERSITY SYSTEM IN A SHADOW-FADE PROPAGATING CHANNEL
Type of the Article	Research paper

General guideline for Peer Review process is available in this link:
(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)

- This form has total 7 parts. Kindly note that you should use all the parts of this review form.



SDI Review Form 1.6

PART 2: Review Comments

	Reviewer's comment	Author's comment (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)
<u>Compulsory</u> REVISION comments	The work presents a model for evaluating multi-user spatial diversity as a method to combat the undesired shadow-fade channel behavior. This approach considers intermediate mobile stations to relay the signal between the two nodes in case of problems to adopt the direct path between source and destiny. A formula is presented for the average outage probability of the received signal-to-noise ratio at the destination mobile station (DMS) when M intermediate mobile stations relay the signal from the source to the DMS, according to a particular protocol. Although a model to evaluate such systems is presented, it is important to thoroughly explain how the validation process was conducted. The author mentioned that a simulation was performed, but he did not specify the details of such a simulation process. Another important point is related to the scalability. The author should consider experiments with more nodes to demonstrate the process efficiency. The main contributions of the work are: • A model to evaluate the outage probability in multi-user spatial diversity environments. • Some comparison between the results obtained from the model and from the simulation. • Strong mathematical basis of the proposed method. • A clear and objective text. The suggested improvements are: • Consider energy consumption evaluation. For instance, compare the energy consumption using the multi-user spatial	1- Energy consumption of a multiuser diversity system has been calculated and published by us in a separate publication. Please see the following: V. Emamian, and M. Kaveh, "Comparing Power Consumption of Collaborative and non-Collaborative Systems", Published in Proceedings of the 36th Asilomar Conference on Signals, Systems and Computers, Nov 3-6, 2002. 2- All the simulations are performed in MATLAB. We used a Shadow-Fade environment and Rayleigh channel for this purpose. 3- Currently, we are working on the case when multiple nodes are involved. We hope to have the new research ready by the end of this year. 4- All the parameters are chosen based



SDI Review Form 1.6

	diversity approach and the “traditional” strategy. • Explain the adopted simulation process. • Consider case studies with more nodes. • Provide details about the evaluation parameters. Are they real world parameters? How were they collected?	on the real-world and practical numbers. This number can be find in almost all standard Wireless Communications textbooks.
--	--	---



SDI Review Form 1.6

<u>Minor</u> REVISION comments	• Verify the section enumeration. • Avoid long paragraphs. • It is possible to insert Table 2 in "Simplified Formula" Section. • Define the symbols AWGN and FDMA. • In [3] you should insert the publication year.	1- I did. All numerations should be fine now. 2- You'll notice changes in some of the long paragraphs. 3- Table 2 in that sentence was redundant and removed 4- AWGN stands for Additive White Gaussian Noise. FDMA stands for Frequency Division Multiple Access. Both are mentioned in the revised version. 5- Submission year is written now.
<u>Optional/General</u> comments	The paper has a good structure as well as a strong mathematical basis. After these major adjustments the paper may be accepted.	