

Response to Reviewers' and Mentor's Comments

Title: From "Characterization of FM broadcast Channel in Office Locations" to "Development of a Reliable Path-loss Model for FM broadcast reception in Office Locations"

Reviewers' Comments

Comment	Summary of how the comment was addressed	Location
<ul style="list-style-type: none"> a. Check plagiarism of the paper b. mention novelty and organization of the paper c. Authors considered conventional methods, what are the findings d. Mention future scope 	<ul style="list-style-type: none"> a. 10% similarity using Turnitin b. Novelty Mentioned and the paper follows the prescribed IMRaD model c. Figure 4 shows is a sample comparative performance of each of the models, showing the deviation of each model value from the measured value. 	<ul style="list-style-type: none"> a. Please see Exhibit A. b. Mention on the novelty is in the last sentence of 1. Introduction and in the Abstract. c. Figure 4 and its discussion
<ul style="list-style-type: none"> a. Abstract: Missing problem statement, research objectives and background study. Abstract could be improved by including those elements b. Research Method: A simple flowchart is recommended to improve readability c. Results and analysis: 2 validation process is not explicitly mentioned in Section 3.2. It is not clear how these two processes help to formulate the proposed model in equation 6. 	<ul style="list-style-type: none"> a. The Abstract was reconstructed and re-worded. b. A flowchart shown in Figure 2 was provided and described. c. The authors stand corrected on this. The Statistical analysis aims only to determine whether the parameters have in any way related to each other. Other analyses, particularly Signal Level Analysis, are used to determine whether or not each parameter contributes to the path loss of the signal. Section 3.2 was re-worded. 	<ul style="list-style-type: none"> a. Please see Abstract. b. Please see Figure 2. c. Section 3.2. Statistical Analysis
<p>The paper is well organized, however punctuation should be improved.</p>	<p>Done.</p>	<p>Whole document.</p>

Mentor's Comments

Comment	Summary of how the comment was addressed	Location
<p>Title. Please Improve the title to be more interesting (e.g. put the method used in the research)</p>	<p>The title was re-worded to show strength and specialty. The title becomes “Development of a Reliable Path-loss Model for FM broadcast Reception in Office Locations” from “Characterization of FM broadcast Channel in Office Locations”</p>	<p>Title</p>
<p>Abstract. The authors said “its accuracy is then more accurate than any of the existing models that were earlier developed” but does not give the accuracy result.</p>	<p>A sample of the accuracy result is presented in Figure 4. It is a graphical presentation on signal level determination using the conventional models and the proposed model. The signal levels from each model is compared to the actual (measured) values.</p>	<p>Figure 4 and its discussion</p>
<p>Introduction.</p> <ol style="list-style-type: none"> 1. Several typos in the paragraph, e.g. signl, etc. 2. Overall this section has been explained well. 	<p>Done</p>	<p>Whole document</p>

<p>Method.</p> <ol style="list-style-type: none"> 1. Please use equation tools in MS Word to create formulas. (Equations 1, 2, 3, 4, 5, etc.) 2. In equation 1, the coefficient value to calculate path loss (PL) is 32.45. Which calculation is Equation 1 used? 3. And also in equation 2, $PL = 69.55 + 26.16 \log(f) - 13.82 \log_2(hb) - 8.29 \log(1.54(hm))^2 - 1.10 + \log(d)[44.9 - 6.55 \log(hm)]$. How the authors generate this formula model? Is each coefficient provided from other calculations or based on the observations? Please explain. 	<ol style="list-style-type: none"> 1. Done 2. Equation 1 is $PL = 32.45 + 20 \log(d) + 20 \log(f)$ and is the equation for the Free-space path loss model. Its accuracy is also compared with the other models as presented in Figure 4. It is one of the least accurate among the models considered. 3. Equations 2 (together with equations 3-5) is based on an existing (conventional) path-loss model and was not developed by the authors. The performance of the proposed model was compared with these models on the accuracy in predicting the signal level based on the measured (actual) values. Please see Figure 4 and its discussion for a sample comparison. 	<ol style="list-style-type: none"> 1. Equations 1-6. 2. Figure 4 and its discussion. Also read 5th paragraph of 2. Research Method. 3. Fourth paragraph of 2. Research Method.
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<p>Result and Discussion.</p> <ol style="list-style-type: none"> 1. The authors used statistical to evaluate the parameter (frequency, polarization, time) but does not provide the value of “r” from the correlation made. 2. The authors said in the Abstract, the evaluation use accuracy, but there is no explanation on how to calculate accuracy in this paper. 3. For statistical analysis, the authors use Pearson correlation to determine the value of “r”. There is a recent research the authors can learn about Pearson correlation, the title is “Optimizing Threshold Using Pearson Correlation for Selecting Features of Electronic Noise Signals”. The authors can read this paper for choosing the arrangement of r. 	<ol style="list-style-type: none"> 1. Table 4 was provided to show the values of the correlation coefficients. 2. Basically, the accuracy of the proposed model is determined by way of comparing its results (signal level) with the results arising from the five conventional models described. An example of this comparison is shown in graphical form in Figure 4. 3. The paper “Optimizing Threshold Using Pearson Correlation for Selecting Features of Electronic Noise Signals” was cited and included in the references. 	<ol style="list-style-type: none"> 1. Table 4 and its description. 2. Figure 4 and its discussion. 3. First paragraph of Section 3.2 and Reference [22]
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Exhibit A

The screenshot shows the Turnitin interface. At the top, there is a navigation bar with the Turnitin logo and user options: Gerino Mappatao | User Info | Messages | Instructor | English | Community | Help | Logout. Below this is a menu with buttons for Assignments, Students, Grade Book, Libraries, Calendar, Discussion, and Preferences. The main content area shows the assignment title: "Development of a Reliable Path-loss Model for FM b...". It includes a "Submit File" button and links for "Online Grading Report", "Edit assignment settings", and "Email non-submitters". A table below displays the submission details:

AUTHOR	TITLE	SIMILARITY	GRADE	RESPONSE	FILE	PAPER ID	DATE
Gerino Mappatao	Development of a Reliable Path-loss Mode...	10%				1246356995	26-Jan-2020