Subject: JCIS - Paper Review
From: Marcelo Sampaio de Alencar <malencar@dee.ufcg.edu.br>
Date: Mon, 06 Mar 2006 11:28:59 -0300
To: "H.M. de Oliveira" <hmo@ufpe.br>

Dear Author(s),

Your manuscript "Compactly Supported One-cyclic Wavelets Derived from Beta Distributions", by H. M. de Oliveira, G. A. A. de Araújo, has been reviewed by the Journal of Communication and Information Systems (JCIS) (formerly Journal of the Brazilian Telecommunications Society) editorial review board and the decision is ACCEPTANCE.

Attached are summary comments of the Journal of Communication and Information Systems editorial review board which indicate their concerns and the revisions they suggest to improve the scientific quality of your manuscript. Please revise the manuscript based upon the enclosed comments, if any.

The final version of the paper MUST follow the IEEE Information for Authors recommendations. Please refer to www.comsoc.org/pubs/jrnal/transcom/authorinfo.html for general instructions.

The main author must also enclose, as a scanned file, or mail separately, a signed Copyright Form on submitting a paper and should have company clearance before submission. Submitted papers are assumed to contain no proprietary material unprotected by patent or patent application; responsibility for technical content and for protection of proprietary material rests solely with the author(s) and their organizations and is not the responsibility of the Brazilian Telecommunications Society or its Editorial Staff. The format of papers submitted to the Journal of Communication and Information Systems should follow IEEE editorial and typographical standards, as described in "Information for IEEE Authors," available on request from the IEEE Transactions/Journals Department, 445 Hoes Lane, Piscataway, NJ 08855-1331 USA or by email to trans@ieee.org. For your convenience, the files JBTS_Copyright.pdf, JBTS_Copyright.doc, IEEEtran.cls and IEEEtran.bst are attached.

The Editors-in-Chief adopted the policy that if a manuscript returned to an author for revision is not revised and returned to the editor within 30 days, it will be administratively withdrawn. Therefore, if you can not meet this deadline please inform immediately in order to accommodate your schedule.

Your selection of the Journal of Communication and Information Systems to publish your work is appreciated.

Sincerely,

Marcelo S. Alencar and Celia Desmond
Editors-in-Chief

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Minha Coluna no Jornal do Commercio:
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Comments of the Associate Editor:

The paper is considered acceptable by both reviewers, although they both mention the theoretical nature of the work without addressing the importance of the results in practical (communication) setting. This should be done in the revision. Paper needs to be modified in terms of equation numbering, and English. Decision: Major Revision.

Comments of the Reviewers:

REVIEW FORM

IEEE COMSOC/SBrT JOINT ISSUE OF THE JOURNAL OF THE BRAZILIAN TELECOMMUNICATION SOCIETY

Title: Compactly Supported One-cyclic Wavelets Derived from Beta Distributions
Author(s): H. M. de Oliveira, G. A. A. de AraÃ°jo

1 - Reviewer's expertise on the subject:

[ ] Expert [x] Knowledgeable [ ] Superficial knowledge

2 - Contribution of the paper (Please, mark the items that represent the paper):

[ ] Inovative research [ ] Technology [ ] Educational
[ ] Tutorial [x] Some scientific content
[ ] Other (Specify):

3 - Please, rank the paper using the following classification:
1-Excelent, 2-Good, 3-Average, 4-Fair, 5-Poor

[2] Subject is interesting and current

[2] Scientific contribution to the area

[1] Methodology and Mathematics

[3] Importance of Obtained Results

[2] Text clarity and quality

4 - Considering the previous items, please, provide an overall evaluation of the paper and, if necessary, add your comments.

[ ] Strongly Recommended [ ] Recomended [x] Acceptable [ ] Rejected

5 - Comments:

This paper addresses how to derive the wavelets based on the derivatives of the beta-distribution functions, which are regular and compact-supported. Since the derived wavelets are broadband in frequency spectrum (the trade-off due to the smoothness), the frequency bandwidth might be the major concern in many applications. In addition, the authors compares their wavelets with Haar wavelet but does not show the multiresolution, completeness and orthogonality properties which the Haar wavelet possesses. It is quite easy to generate any new wavelet without the aforementioned properties which are demanded by signal compression and approximation. The reviewer considers this manuscript as a very interesting mathematics paper but the corresponding signal processing or communications applications are in question.

The detailed comments are given as follows:

1. The authors mention the central limit theorem in the paper as the importance of their work. However, the reason why the central limit theorem has to be addressed when a wavelet is generated is not clear. The authors are suggested to further clarify that.

2. How to choose the order N for higher-order beta wavelets is not addressed. What is the effect if we choose different order N?

3. Applications of beta-wavelets should be great concern.

4. There are some grammar errors in the concluding remarks.

REVIEW FORM

IEEE COMSOC/SBrT JOINT ISSUE OF THE JOURNAL OF THE BRAZILIAN TELECOMMUNICATION SOCIETY

Article no: JBTS013

Title:Compactly Supported One-cyclic Wavelets Derived from Beta Distributions

Author(s): H. M. de Oliveira, G. a. A. de Araujo

1 - Reviewer's expertise on the subject:

[ ] Expert [x] Knowledgeable [ ] Superficial knowledge

2 - Contribution of the paper (Please, mark the items that represent the paper):

[ ] Inovative research [ ] Technology [ ] Educational
[ ] Tutorial [x] Some scientific content
[ ] Other (Specify):

3 - Please, rank the paper using the following classification:
1-Excelent, 2-Good, 3-Average, 4-Fair, 5-Poor

[3] Subject is interesting and current

[4] Scientific contribution to the area

[3] Methodology and Mathematics

[4] Importance of Obtained Results

[3] Text clarity and quality

4 - Considering the previous items, please, provide an overall evaluation of the paper and, if necessary, add your comments.

[ ] Strongly Recommended [ ] Recomended [x] Acceptable [ ] Rejected

5 - Comments:
This paper provides some innovation in deriving a wavelet from a beta distribution, though most of the general theory of deriving wavelets from PDF's is well known. I would say that this paper is acceptable only after some changes. These are the unsatisfactory points about the paper:

(1) This paper does not provide any experiments for potential applications. The properties and behavior of this wavelet could be clarified with more simulations.

(2) I would be interested in seeing how this would be different from the other wavelets.
The authors mention some of the similarities but none of the differences that may or may not make it better than others.

(3) In the abstract and in the conclusion the authors state that these wavelets are "some" kind of Haar wavelets but this is not explained in the body.

(4) It is difficult to cross refer to the equations though they look correct, since they are not numbered and the derivations don't refer to the previously mentioned equations.

(5) Notations are not clear in some instances like when a new variable t' is defined but never used. The symbol ":=" is misused, mixing it up with "=".
It is difficult to mention where because the equations are not numbered- fifth line in page 6, seventh line in page 7, among others. It would be uniform and wouldn't hurt if all the ':=' signs are replaced by "=".

(6) There are some typographical errors which could have been easily avoided, eg.- affine is spelled as afin, their as they, rely as relay, function as fuction.