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#259 (1569638285): Odd-EveOdd-Even Quantisation and Cartesian Delta-Sigma (□□) Upconverters for Transmitter Design



## #259 (1569638285): Odd-EveOdd-Even Quantisation and Cartesian Delta-Sigma (□□) Upconverters for Transmitter Design

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**Paper title***Odd-EveOdd-Even Quantisation and Cartesian Delta-Sigma (□□) Upconverters for Transmitter Design*

**Conference and track** **13th IEEE International Conference on Communication Systems 2012 - Main Conference**

**Abstract**   This paper offers an alternative odd-quantisation approach scheme for Cartesian □□ systems...

**Keywords** Odd quantisation ; Cartesian □□ Upconverters Only the chairs can edit

**Topics** Femtocell networks; Green communications; Transceiver design and analysis 

**Personal notes** 

**Roles** You are the creator and an author for this paper.


**Status** Published 

**Presented** by not specified  in session MC5: *Signal Processing for Communications* chaired by [Lay Teen Ong](#)  from Thu, November 22, 2012 12:55 +08 until 14:55 (5th paper) (24.0 min.)

**Final**



## Review

| Actions   | Timeliness/Relevance | Novelty/Originality | Presentation/Readability | Impact       | Overall Rating                                                                                         |
|-----------|----------------------|---------------------|--------------------------|--------------|--------------------------------------------------------------------------------------------------------|
| completed | Good<br>3            | Good<br>3           | Good<br>3                | Average<br>2 | Weak Accept<br>3  |

### Comments for Authors

The main result of the paper is to show that odd-quantisation scheme has about 2dB improvement in terms of SNR compared with even-quantisation scheme for low amplitude signal.


The organization and reasoning of the paper is good. However, some descriptions are conflicted with the illustration in the Figures (Fig 1 and 6). And there are minor grammatical errors.

A possible improvement might be finding out the analytical expression explaining the 2dB SNR improvement by odd quantisation scheme.

|           |           |           |                |           |                                                                                                        |
|-----------|-----------|-----------|----------------|-----------|--------------------------------------------------------------------------------------------------------|
| completed | Good<br>3 | Good<br>3 | Very Good<br>4 | High<br>3 | Weak Accept<br>3  |
|-----------|-----------|-----------|----------------|-----------|--------------------------------------------------------------------------------------------------------|

### Comments for Authors

An analysis of the noise and distortion products of the odd-quantisation compared to the even-quantisation scheme is investigated. The paper is well written.

| Actions                                          | Timeliness/Relevance | Novelty/Originality | Presentation/Readability | Impact       | Overall Rating                                                                                         |
|--------------------------------------------------|----------------------|---------------------|--------------------------|--------------|--------------------------------------------------------------------------------------------------------|
| The references has to be changed to IEEE format. |                      |                     |                          |              |                                                                                                        |
| completed                                        | Good<br>3            | Good<br>3           | Good<br>3                | Average<br>2 | Strong Accept<br>4  |

**Comments for Authors**

will be good to give some physical reasons and explanation on the performance of the schemes and how it compare with standard techniques.

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Sirmayanti Sirmayanti



|                 |                                                                                             |
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ICCS paper draft

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Dari: sirma yanti (sirma\_yanti@yahoo.com)

Kepada: vandana15@gmail.com

Tanggal: Kamis, 24 Mei 2012 pukul 11.53 GMT+8

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dear,

Here the first draft for ICCS paper.

Sec V (RESULT) has not written yet. I am still struggling with my OFDM\_to\_DS code.

I sent the odd-quantisation code (PIMRC) few days ago.

Kind regards,

Sirma

---

**Dari:** Vandana Bassoo <vandana15@gmail.com>

**Kepada:** sirma yanti <sirma\_yanti@yahoo.com>

**Dikirim:** Senin, 21 Mei 2012 20:44

**Judul:** Re: asking

Hi Sirma,

Please send me the matlab code for odd quantisation that you used for the single tone pimrc paper. I will generate the results for you.

Kind regards,

Vandana

On Mon, May 21, 2012 at 7:49 AM, sirma yanti <[sirma\\_yanti@yahoo.com](mailto:sirma_yanti@yahoo.com)> wrote:

dear,

I have some questions related the code OFDM into DS.

First test with Even then Odd. The case that I am asking here is on the Even.

Question 

1)

OFDM as input to DS. OFDM input is 'symbol\_in'. DS input is 'un'. Which one will be generated as input?

I do: symbol\_in comes first as OFDM input then I get 'after\_IFFT'.

Then (line 62-65) I write:

```
p=1;
```

```
A=-12; %-12dB=0.0631 linear
```

```
A(p)= 10^(A/10); %in linear
```

```
un=A(p)*(after_IFFT(i)/oversample_per_period*offset)+noise;
```

Is this right?

2) Which variable will be plotted to get similar figure on thesis page 61.

Please have a look quick the code: DS\_inputOFDM. Please give some hints 😊

Many thanks,  
Sirma

--  
Kind Regards,  
Vandana



draft1\_to Vandana.docx  
473.6kB