**IEEE P802.15**

**Wireless Personal Area Networks**

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| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) | |
| Title |  | |
| Date Submitted |  | |
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| Re: | Task Group 15.4g | |
| Abstract | Comment Resolution for Letter Ballot 70, CID 39 | |
| Purpose | Comment Resolution | |
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# Proposal for simplifying Clause 16.1.2.5 Code-symbol interleaving

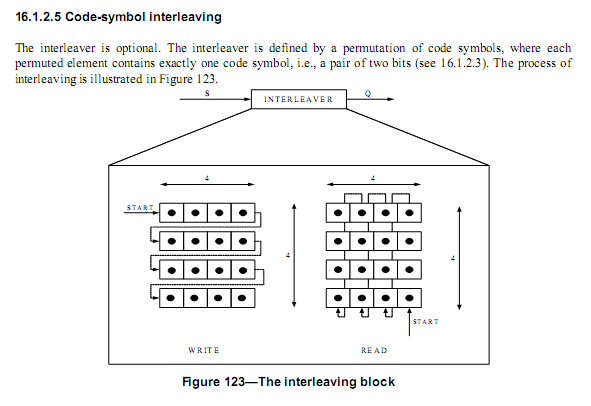
## CID 39.

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| The interleaver description is too complicated. | Simplify to a concise description of a write-in-rown/read-in-column interleaver. |

## Proposal

Accept in principle. Replace the entire sub-clause 16.1.2.5 with the following text:

<< Start of text >>



Coded symbols are written into an array of rows and columns. Coded symbols are written into the array row-wise, and read out column-wise. For this interleaver,

The sequence of output coded symbols is generated from the input sequence

where

and

<< End of Text >>

## Verification using a Matlab Script

S=[]

Nr=4

Nc=4

Ninter=Nr\*Nc

N=16\* 1

for i=0:N-1

S=[S ( Ninter - mod(i\*Nc,Ninter)-mod(floor(i/Nr),Nc) ...

+ floor(i/Ninter)\*Ninter-1 ) ];

end

S

num2str(S)

## N=16

for i=0..N-1,

k= 15 11 7 3 14 10 6 2 13 9 5 1 12 8 4 0

## N=32

for i=0..N-1,

k= 15 11 7 3 14 10 6 2 13 9 5 1 12 8 4 0

31 27 23 19 30 26 22 18 29 25 21 17 28 24 20 16

## N=48

for i=0..N-1,

K= 15 11 7 3 14 10 6 2 13 9 5 1 12 8 4 0

31 27 23 19 30 26 22 18 29 25 21 17 28 24 20 16

47 43 39 35 46 42 38 34 45 41 37 33 44 40 36 32