IEEE P802.15

**Wireless Personal Area Networks**

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| Project | TG 4n Chinese MN  |
| Title | **November Meeting Minutes** |
| Date Submitted | Nov 15, 2012 |
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| Re: | Meeting Minutes |
| Abstract |  |
| Purpose | Minutes of TG 4n sessions |
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**Tuesday, November 13, 2012, 8:30 – Session 1**

Meeting was called to order by the chair.

The chair asked for approval of the previous meeting minutes (12-0540).

Meeting minutes were approved unanimously.

The chair: This is IEEE meeting so IEEE rules of professional meetings, ethics and IEEE patent policy (see <http://standards.ieee.org/about/sasb/patcom/>) apply.

No one answered as aware of any patents essential for the implementation of the standard.

The chair presented “Opening Report” (12-0610).

Liang Li presented BUPT proposal 15-12-0584-00-004n-dual-band-dsss-phy-proposal-for-ieee802-15-4n

Q: Why use the Raised Cosine Pulse Shaper filter, which is not power-efficient ones.

1. The Chinese Radio management requires -36db leaking limitation. This RS-filter has been approved in 4C.

Ken Mori presented proposal 15-12-0588-02-004n-technical-proposal-for-wearable-15-4n-device

Q: There are over 50 channels on one band. How to change channels quickly?

The meeting was recessed by the chair at 9:50 AM.

**Tuesday, November 13, 2012, 10:30 – Session 2**

Guido Dolmans presented 15-12-0623-00-004n-fsk-phy-proposal-for-tg4n

Q: How to deal the multiple–data rate requirement?

Suggestion to summarize all of proposals presented. This will be included in these minutes.

The meeting was recessed by the chair at 11:45 AM.

**Thursday, November 15, 2012, 08:00 – Session 3**

Presentation of BUPT-2 proposal 15-12-0585-00-004n-tamed-spread-spectrum-proposal-for-ieee802-15-4n

Presentation of ATMEL proposal to consider ranging: 15-12-0651-00- 4n-ranging-with-MBAN-narrow-band-phy

Q: Why use the SRRC ?

A: To limit the power leaking on spectrum

Comment: It is not necessary. As Gaussian filter is applies in TX, the SRRC is not necessary, otherwise, as signal is analog, the filter is hard to implemented.

Comment: 50kb/s is not suitable to application. At least 200kb/s is required.

Q: May you give the detail measurement of ranging operation in-door?

Liang: I do not present the details of this presentation. Are going to ask ATMEL expert to give the clear presentation and Q&A.

Q: Why use the 16-ary chip table (OQPSK) in IEEE802.15.4-2011.

A: The table was designed in IEEE802.15.4B. See doc: 15-05-0103.

The meeting was recessed by the chair at 9:50 AM.

**Thursday, November 15, 2012, 10:30 – Session 4**

Chair presented the current CMB proposal summary

-from 802.15.4-2011

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| **Frequency Band (MHz)** | **Bandwidth** | **Channels** | **Chip Rate (kchip/s)** | **Modulation** | **Bit Rate (kb/s)** | **Symbol Rate (ksymbol/s)** | **Symbols** |
| 779 - 787 | 2MHz | 4 | 1000 | QPSK | 250 | 62.5 | 16-ary |
| 779 - 787 | 2MHz | 4 | 1000 | MPSK | 250 | 62.5 | 16-ary |

-0584

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| **Frequency Band (MHz)** | **Bandwidth** | **Channels** | **Chip Rate (kchip/s)** | **Modulation** | **Bit Rate (kb/s)** | **Symbol Rate (ksymbol/s)** | **Symbols** |
| 407-425 | 2MHz | 9 | 1000 | QPSK | 250 | 62.5  | 16-ary |
| 407-425 | 4MHz  | 4.5 (4) | 2000 | QPSK | 500 | 125 | 16-ary |
| 608-630 | 2MHz  | 11 | 1000 | QPSK | 250 | 62.5 | 16-ary |
| 608-630 | 4MHz  | 5.5 (5) | 2000 | QPSK | 500 | 125 | 16-ary |

-0588

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| **Frequency Band (MHz)** | **Bandwidth** | **Channels** | **Chip Rate (kchip/s)** | **Modulation** | **Bit Rate (kb/s)** | **Symbol Rate (ksymbol/s)** | **Symbols** |
| 174 - 216 | .4MHz | 105 |  | FFSK | 200 |  |  |
| 407-425 | .4MHz | 45 |  | FFSK | 200 |  |  |
| 608-630 | .4MHz | 55 |  | FFSK | 200 |  |  |

-0585

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| **Frequency Band (MHz)** | **Bandwidth** | **Channels** | **Chip Rate (kchip/s)** | **Modulation** | **Bit Rate (kb/s)** | **Symbol Rate (ksymbol/s)** | **Symbols** |
| 407-425 | .5MHz | 36 (31) |  | GMSK | 50 | 247.6 |  |
| 608-630 | .5MHz | 44 (41) |  | GMSK | 50 | 247.6 |  |

Chair: why only 31 channel in 400 MHz band, instead of 36, 41 channels in 600 MHz bands? Why not include 176 MHz band? The Call for Proposals is for the three bands.

More channels -> better agility to avoid interference

Filtered FSK better Adjacent Channel Rejection than OQPSK

FSK receiver low power with ring oscillator

Can use ranging using doc. -0651

We will need appendix to recommend how to deal with interference in these bands.

Chair asked for channel lineup with TV channels for interference avoidance.

The chair presented the “Closing Report November 2012” (12-0622)).

VChair: Welcome more proposals in Jan/2013 conference.

The meeting was adjourned by the chair.