**IEEE P802.15**

**Wireless Personal Area Networks**

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| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) |
| Title | **SG ULP meeting minutes March-2013** |
| Date Submitted | 20 March 2013 |
| Source | [Kiran Bynam] [Samsung.] | E-mail:[kiran.bynam@samsung.com] |
| Re: | Ultra Low Power amendment to IEEE 802.15.4 |
| Abstract | SG ULP Meeting minutes  |
| Purpose | Meeting minutes |
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# TG4q Meeting March 19 2013

**Chair : Shahriar Emami**

**AM1 session:**

**Opening report (DCN: 15-13-0157-00-004q) for ULP presented by Chair**

January meeting minutes (DCN: 15-13-0048-04-004q ) is approved

Motion to approve the meeting minutes passed anonymously

Moved by: Steve (Semtech)

Seconded by: Allan (Samsung)

Chair presented the outline of TGD document.

There is a discussion on the 30 m range. Partcipants proposed that it should be typical range rather than minimum range to be supported

MICS Radio band is added to the TGD outline document

TGD outline document (DCN: 15-13-0158-01-004q) is uploaded by Chair.

**AM2 session**

**Ed Callaway (Sunrise Micro Devices) presented his document titled “Large Volume ULP applications” (DCN: 15-13-0125-02-004q)**

Rick Powell (MicroSemi) – what could be the expected power consumption for proposed application. Are you targeting energy harvesting

Ed Callaway: Energy Harvesting is an option

J.Robert (Frederich -Alexander University) : What would be expected range

Ed Callaway: Typically, it is 1 to 2 m. But, in some cases, the requirement could be little higher

J.Robert (Frederich -Alexander University) : What type of traffic do you expect in such an pplication

Ed Callaway : it depends and needs to be analyzed for different scenarios of applications

Kiran Bynam: What is expected Power consumption

Ed Callaway: tens of mA possible.

**Internet of Things applications (DCN: 15-13-0157-00-004q) is presented by Seong-Soon Joo (ETRI)**

Rick: what applications are new?

Seong-Soon Joo: Its same applications. But, these are the ones that get benifited by TG4q

Jinesh : How these applications will impact the PHY Layer?

**Wednesday March 20 AM1 session:**

**Jinesh Nair(Samsung) presented the Channel Models (DCN: DCN: 15-13-0193-00-004q)**

**Thursday March 21 AM1 session:**

**Guido Dolmas (IMEC) presented the document (**DCN: 15-13-0155-00-004q)

Rick Powell: There is a minimum channel spacing that should be present as per regulations.

Guido Dolmas: Yes. That can be changed

Jacob: System Power is independent in some parts like PLL. This could be good overhead for low data rates below 100 kbps

Guido Dolmas: it (Low data rate) is just an option and we can chose not to use it

Grath: whats the power consumption in channel selection filter

**Rick Powell Presented the document “FSK PHY Channelization and data rate proposal” (DCN: 15-13-0190-00-004q)**

Guido : why not 400 kbps

Rick : we think 2 FSK is slightly better in power consumption

Rick : only way to get better Eb/No is get up in data rate.

Steve(Semtech): why propose 25 kbps then ?

Rick Powell: Just for consistency

Guido: why 25 kbps ?

Rick : Just for consistency with other proposals. We would consider data rate above 200 kbps to be ideal

Kiran Bynam: Transmit Power goes up when you transmit high data rates. How do you think energy efficiency will be improved with high data rates.

Jacob : PA efficiency may be high at high data rate and hence they are seeing that scenario

Guido: whats preference 2-FSK and 4-FSK

Rick : Performance is really close and hence we would prefer 2-FSK

Kiran : ACR and ALCR values need not be changed as proposed in your presentation. It is very implementation dependent and there should be room for other implementations.

Rick : May be , i agree.

AM2 session:

Discussion on Technical Guidance document.

Many Parameters were added to the Technical Guidance document and uploaded (DCN: 15-13-0233-00-004q)

Ed Callaway raised a question on status of work on applications.

Shahriar Emami said that we had couple of sessions inviting the applications for TG4q.

Ed Callaway: Work on TGD is not recommended before freezing the applications

Shahriar Emami agreed to extend the call for applications until May meeting

TG4q is Adjourned for this session.