**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 | [20 Nov 2009] |
| Source | [][][address] | Voice: [ ]Fax: [ ]E-mail: [ ] |
| Re: | [Task Group 802.15.4e Plenary Meeting in Atlanta] |
| Abstract | [Task Group 802.15.4e Minutes.] |
| Purpose | [Official minutes of the Task Group Session |
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**IEEE 802.15 Plenary Meeting – Session #63**

**Nov 2009**

**Task Group 4e Minutes**

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# Monday, 16 Nov 2009, 16:00 (PM2)

**16:05** Pat Kinney, TG4e chair, called the meeting to order.

Chair presented opening report 15-09-0758-00-004e:

Chair displayed the IEEE-SA slides #1 through #4 of the IEEE patent policy.

Chair asked if anyone in the meeting was personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance? There were no responses.

Chair presented the agenda 15-09-0719-00. Discussion and revision resulted in updating the agenda to rev 1. Motion to approve agenda as modified was moved by Ludwig Winkel and seconded by Myung Lee. Upon neither discussion nor objection the motion carries by unanimous consent.

Motion to approve minutes from Waikoloa, 15-09-0672-00-004e was moved by Myung Lee and seconded by Zafer Sahinoglu. Upon neither discussion nor objection the motion carries by unanimous consent.

**16:35** Wei Hong presented 15-09-0646-02

* Significant discussion on issue of 20 year battery life in areas such as the implications as to transmit, receive, protocols, and also what energy drain is required to achieve this life?

**18:05** meeting recessed

# Tuesday, 17 Nov 2009, 9:00 (AM1)

**8:14** Meeting called to order by Pat Kinney

Myung Lee (CUNY) presented EGTS’ proposal, doc [15-09-0666-02-004e](https://mentor.ieee.org/802.15/dcn/09/15-09-0666-02-004e-egts-subgroup-report.ppt)

Presentation CQUPT Demonstration System of EGTS Proposal Draft, [doc 15-09-0775-00-004e](https://mentor.ieee.org/802.15/dcn/09/15-09-0775-00-004e-the-cqupt-demonstration-system-of-egts-proposal-draft.ppt)

Comment resolution ensued (row #’s):

* + 3-agreed, change references in document from Commercial/CM to EGTS and amend Annex M to be explanatory of EGTS uses/applications
	+ 85, 138 – agreed, Zafer Sahinoglu to work out the resolution to this comment
	+ 92 – agreed, Myung Less to work out resolution to this comment
	+ 111 – agreed
	+ 112 – rejected, term is defined in standard 15.4-2006

**9:55** meeting recessed until AM2

# Tuesday, 17 Nov 2009, 10:30 (AM2)

**10:38** Michael Bahr (Siemens) asked if there were any issues or concerns with the Factory Automation portion of the preliminary draft, there were none.

Comment resolution ensued (row #’s):

* + 22 - agreed, changed “need” to “are allowed”
	+ 34 – rejected, frame version refers only to the FA mode
	+ 35 – rejected, retransmission algorithm is defined in draft
	+ 37 – rejected, Michael to reply to commenter with rationale
	+ 48 – rejected, Michael to reply to commenter with rationale
	+ 55 – rejected, change “use” to “shall use”, eliminate “a simple…”
	+ 75 – rejected, Michael to reply to commenter with rationale
	+ 80 – rejected, latency requirements for joining a network are more relaxed
	+ 81 – accepted, Michael to change this area of draft
	+ 82 – rejected, Michael to reply to commenter with rationale

**11:17** Rene Struik presented reduced header (15-09-0782-01-004e)

ACK mechanism: TG4e added a secure ACK mechanism to 15.4-2006. Discussion ensued as to the proper value for the ACK time delay.

Action Item: P Kinney to respond with time delay (CSMA?) included in ISA100.11a

Action Item: L Winkel to respond with time delay (CSMA?) included in WirelessHART

Header reduction mechanism:

* + Rene to work with Michael Bahr to seek compromise on header reduction

**12:05**: The meeting recessed until PM1.

# Tuesday, 17 Nov 2009, 13:30 (PM1)

**13:49** Wun-Cheol Jeong (ETRI) presented the Channel Diversity subgroup report, doc 15-09-0780-00-004e. Since this technique requires no additional behavior, informative text will be added to Annex M (M.6)

Tim Godfrey (EPRI) presented an overview on the additional MAC PIBs (15-09-732-02-004e). Discussion ensued as to whether these PIBs should be mandatory. Applications such as RFID tags could be adverse to this mandate.

Chair asked if there were any objections to including the text contained within 15-09-732-02 into the draft document; there were no objections. Chair advised group that he will work with Tim Godfrey and Mike McInnis to draft a straw poll email asking the WG if these PIBs should be mandatory or optional

Betty Zhao presented Association Procedure Optimization, document 15-09-779-00-004e. To allow those not present at this meeting to critique this proposal, the vote to add this proposal to the draft will be delayed until Wednesday PM1.

**17:52** Chair recessed the meeting

# Wednesday, 18 Nov 2009, 13:30 (PM1)

**13:41** Meeting called to order

Enhanced Low Energy presentation by Wei Hong (15-09-800-00)

* + Changed data request frame by adding an optional payload that allows a period to the first listen, number of repetitions, repeat listen interval
	+ Defaults on T0=0, N=1
	+ Require that no additional datarequest be sent before T0+N\*T interval elapses
	+ There were no objections to including this advanced behavior in the next draft; so the next draft will include the above behavior

Fast Association by Betty Zhao (15-09-0779-00)

* + 6 votes against including this fast association in the next draft
	+ 1 vote for including the fast association behavior in the next draft
	+ 4 abstaining from making voicing an opinion
	+ Another straw poll was taken but this time without the allowance of data transmission before the association response
		- 2 votes against including this fast association in the next draft
		- 6 votes for including the fast association behavior in the next draft
		- 3 abstaining from making voicing an opinion
	+ The proposal for fast association without the data transmission before association will be included in the next draft revision

**15:18** Chair recessed the meeting

# Wednesday, 18 Nov 2009, 16:00 (PM2)

**16:06** Chair called meeting to order

**16:08** TG4f proposal by Michael McInnis (15-09-707-01)

* + Four frame types are defined in 15.4-2006
	+ Three new frame types are already defined in the draft (LE, FA, secured ACK)
	+ Leaves only 1 extra bit in the FCF; which should then be used as an extension bit indicating that a following octet defines the Frame type
	+ Adhoc proposal of using bits 7,8,9 of the FCF to define additional frame types

Presentation of Factory Automation mechanism of FCF by Michael Bahr

Rene Struik presented 15-09-233-07 as a proposal for Tg4f, with frame fields below the blue line being those frame fields for RFID

* + Chair conducted a straw poll of the TG4f attendees if the frame fields described in doc 15-09-0233-07 below the blue line fulfilled the needs of 4f with the result of 12/0/1, indicating that the proposal fulfilled the RFID requirements
	+ Chair conducted a formal ballot as to whether to include the proposal as described in 15-09-0233-07 (below blue line) in the next TG4e draft. The vote result was 15/0/5; the proposal will be accepted for inclusion into the next TG4e draft.
	+ TG4f was informed that the text describing the proposal must be submitted to the TG4e editors before 1 December 2009. If this text is not received before 1 December 2009, the above proposal will not be in the TG4e draft.

**18:31** meeting recessed until Thursday PM1

# Thursday, 19 Nov 2009, 13:30 (PM1/PM2)

**13:45** Chair called meeting to order

**13:50** Secured Ack proposal by Rene Struik (15-09-0782-01)

* Time delay for secured ACK?
* 15.4-2006 requires ACK be sent between *aTurnaroundTime* and *aTurnaroundTime* + *aUnitBackoffPeriod* which for the 2.4 GHz PHY ranges from 12 symbols to 32 symbols (192 µs – 512 µs)
* Proposal for secured ACK is 64 symbols (1024 µs)
* ACK delay: ACK timeout formula should be dependent upon the beginning of ACK rather than end as stated in "802.15.4-2006"
* Straw poll:
	+ 5 votes for ACK w/o CSMA and timing calculations 32 symbols
	+ 0 votes for ACK w/CSMA and no timing constraints 0
	+ 4 abstains
	+ Instruction to editor is to insert secured ACK without CSMA but with (*aTurnaroundTime* + *aUnitBackoffPeriod)*
* Instruction to the editors: assume that corrigendum to 2006 is in place
* FCF proposal by Rene Struik (15-09-233-08)
	+ Straw poll
		- 5 votes-Adopt FCF framework as proposed by 15-09-233-08
		- 2 votes-Do not adopt FCF framework as proposed by 15-09-233-08
		- 9 votes-abstain
		- Motion: *that text incorporating FCF framework as proposed by 15-09-233-08 to be included in the next TG4e draft, contingent upon providing text that is consistent with functionality provided by 15-09-0604-03*
			* moved by Rene Struik
			* seconded by Wei Hong
			* vote result was 7/2/6, motion carries
* Motion***:*** *that all input text to the TG4e draft shall be submitted to TG4e editors before 1 December 2009*
	+ Moved by Michael Bahr
	+ Seconded by Rene Struik
	+ Vote result was 14/0/0, motion carries

**16:04** Meeting adjourned