**IEEE P802.11
Wireless LANs**

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| **TGaq Meeting Minutes – May 2014 (Hawaii)** |
| Date: 2014-5-26 |
| Author(s): |
| Name | Affiliation | Address | Phone | Email |
| Dapeng Liu | China Mobile | Xibianmen West Ave, Xuanwu District, Beijing, China | +86-13911788933 | liudapeng@chinamobile.com |

Abstract

This document comprises the Minutes for the Task Group aq (TGaq) meeting (3 sessions – Monday (PM2), Tuesday (AM2), Wednesday (PM1), Thursday (AM2) held in May 2014 in Hawaii, USA.

**Chair: Stephen McCann (BlackBerry)
Vice Chair: Yunsong Yang (Huawei Technologies)**

**Technical Editor: Dan Gal (Alcatel-Lucent)**

**Secretary: Dapeng Liu (CMCC)**

**Monday, May 12th, 2014, 13:30 to 15:30 (PM1)**

**Call to order**

Meeting called to order on Monday, May 12th, 2014 by TGaq Chair, Stephen McCann, at 13:00.

**Agenda**

The chair showed the week’s agenda (802.11-14/0480r0).

Presentations in the agenda:

* + Re-present closing report.
	+ Officer election nominations.
	+ Documentation Re-cap.

The chair asked for comments for the agenda:

* + Chair: Dapeng Liu can Yunsong Yang ask to delay their presentation.
	+ Joe Kwak (InterDigital):Ask to have a placeholder for ANDSF presentation.
	+ Jing-Rong Hsieh (HTC):Request to add a presentation on Tuesday.
	+ Chair: Any objection to approve the agenda?

The chair updated the agenda (11-14-0480r1)

**The agenda 11-14-0480r1 was approved.**

**IEEE patent policy**

The chair reviewed the IEEE patent policy and read thoroughly the call for Potentially Essential Patents. No such claims were made.

**Approval of previous meeting minutes**

The chair requested the approval of the March 2014 Plenary meeting minutes [doc: 11-14-0481r0].

The meeting minutes were approved by unanimous consent.

**The Chair presents the March 2014 closing report.**

Architecture, protocol, example of message flow etc. were discussed in March 2014 meeting.

**Documentation Re-cap**

Use cases (11-13-0125r6) was mentioned

Updated terminology document (11-13-0299r3)

Skeleton framework document (11-13-0300r1)

**Officer Election**

The chair introduces the status and procedure of TG officer election.

Current nominations:

* Chair: Stephen McCann (BlackBerry). No other nominations.
* Vice Chair: Yunsong Yang (Huawei Technologies). No other nominations.
* Editor: Dan Gal (Alcatel-Lucent). No other nominations.
* Secretary: Dapeng Liu (CMCC). No other nominations. Will confirm whether there will be other nominations.

Nomination will close tomorrow morning AM2. Election will be held at tomorrow morning AM2 session.

**New Topic**

The Chair asks if there is anyone want to propose new topic to discuss.

Mike Montemurro (BlackBerry): Do you want to go through the service transaction protocol document?

Chair: Is there any objection to add this presentation in the agenda?

There is no objection from the group.

**Presentation by Mike Montemurro (BlackBerry) on “Service Transaction Protocol” (11-14-1384r3)**

Mike Montemurro (BlackBerry) presents the document.

Yunsong Yang (Huawei Technologies):

* Page 3, general query, the name is misleading. the list should be 1. ULP count is better.
* 8.4.6.1 Token should behind the length filed.
* Figure 8-403 change the field name.
* Should allow different type of encapsulation.

Joe Kwak (InterDigital): figure 8-403 is not related to the text. This document is the best thing we have.

Jing-Rong Hsieh (HTC):general query section, two other names, should be correct.

Chair: Is any objections to let Dan start working on this document?

Mike Montemurro (BlackBerry): Will make a new version this week.

Dan Gal (Alcatel-Lucent): Make it clean, no change marks.

**Agenda for tomorrow**

Chair:

* Officer election and 4 presentations.
* Wednesday session: whether to cancel this session will be discussed tomorrow.

**Recess**

Meeting is recessed at 14:10 until AM2 on Tuesday May 13th, 2014.

**Tuesday, May 13th, 2014, 10:30 to 12:30 (AM2)**

**Call to order**

Meeting called to order on Tuesday, May 13th, 2014 by TGaq Chair, Stephen McCann, at 10:30.

**Agenda**

The chair showed the week’s agenda (802.11-14/0480r2).

Two presentations in the agenda.

* Message flows for local network service [11-14-0643r0]
* TGaq CAG Number IE [11-14-0618r1]

**The agenda 11-14-0480r2 was approved.**

**Officer Election:**

The following officers were elected.

* Chair: Stephen McCann (BlackBerry).
* Vice Chair: Yunsong Yang (Huawei Technologies).
* Editor: Dan Gal (Alcatel-Lucent).
* Secretary: Dapeng Liu (CMCC).

**Presentation byJing-Rong Hsieh (HTC)on “Message Flows for Local Network Service” (11-14-0643r0)**

Jing-Rong Hsieh (HTC)presents the document.

* + Two types of service: one camera connect to an AP, the other one is soft AP
	+ Smartphone need to manually selection of BSS.
	+ type two, select BSS, launch APP,
	+ User usually wants to accomplish a certain task by launching an application. should be service centric not device centric.
	+ Transparent mode PAD in type 1 network: STA launch App, trigger service discovery.
	+ Opaque mode PAD in type 1 network. The AP can answer the query. AP then try to wake the STA.
	+ PAD in type 2 network. The AP is soft AP. it has limited function.
	+ Comparisons between the two types of network.
		- Soft AP has limited services to provide. selected information may be embedded in its beacon or probe response rather than in query response to reduce network traffic.
		- Power saving. a proxy recording the sleep situation of STA helps.

Yunsong Yang (Huawei Technologies): The AP has the function of proxy?

Jing-Rong Hsieh (HTC): a proxy collocate with AP. It is an aq enabled AP.

Mike Montemurro (BlackBerry):need to consider timer in the STA.

Joe Kwak (InterDigital):flow chart. 11aq should use existing protocols. the picture shows that the STA need to understand the protocols. What protocols are using.

Jing-Rong Hsieh (HTC):For the AP to SP part, the AP can translate UPnP query.

Joe Kwak (InterDigital):showing an example of the protocol would be more helpful.

Chair: Do you want to write some normative text by next meeting?

Jing-Rong Hsieh (HTC): Yes, can try to do that.

Mike Montemurro (BlackBerry):we are working on the document. we can leave a place holder in the document.

**Presentation by Yunsong Yang (Huawei Technologies)on “TGaq CAG Number IE” (11-14-0618r1)**

Yunsong Yang (Huawei Technologies) presents the document.

* + Previous contribution to extend of 11ai CAG number IE.
	+ few drawbacks in design
		- Option 1: support only on protocol per IE and needs multiple IEs for multiple advertisement protocols.
		- Options 2: limited version number.
	+ proposed options 3
		- Extend option 1 design, extend CAG into a tuple. This IE can support multiple protocols. Drawback is not compatible to excising ai draft.
	+ proposed option 4
		- Condense advertisement protocol ID field and scope field into 5-bit partial advertisement protocol ID field.
		- Pros and cons of this approach.
	+ CAG is a group of feature of access network. up to the vendor to include CAG ANQP. AP only. AP caches the network information.

Joe Kwak (InterDigital):why not do something parallels.

Chair: looking at system level, very simple to extend 11ai.

Joe Kwak (InterDigital):the STA have to remain PAD state for a long time? do not understand the use case.

Yunsong Yang (Huawei Technologies): The intention is to revisit the same AP. if the AP does not change, can save the message exchange.

Joe Kwak (InterDigital):If the network is static, that would be useful.

Chair: go back to option 3. How do you prevent a very large frame? do not do big frames in beacon. option 4, it is not extensible. Prefer this option. This work should be done in TGai. Should submit proposal to TGai.

**Straw poll: “Which of the following CAG number IE designs do you prefer?”**

* + - * + **Option 1 11-14-0325r0**
				+ **option 2 as in 11-14-0325r0**
				+ **option 3 as proposed in this contribution**
				+ **option 4**

**Straw poll result:**

 **1 for option 1**

 **2 for option 2**

 **1 for option 3**

 **5 for option 4**

Chair: FILS defines HLP, is there overlap between opaque encapsulation mode?

Yunsong Yang (Huawei Technologies): DHCP offer use a broadcast. how to translate to the destination mac address or just use broadcast. Need a rule for the destination MAC address. It is a possible way for encapsulation mechanism.

Mike Montemurro (BlackBerry):do not know whether it is useful. IEEE 802.11-2012, frame in 11r has a similar frame.

Joe Kwak (InterDigital): some thing not mature in ai will put difficultly. Use more mature would be better.

Mike Montemurro (BlackBerry):do not need to MAC address, check to see whether to use the FT action frame. Can define target Mac address. Fits better into the system architecture.

Robert(Motorola Mobility): fragmentation should be considered.

Joe Kwak (InterDigital):Need to know the MAC address.

Mike Montemurro (BlackBerry):you do not have association. The frame body is FT request type. add a new type for service discovery.

Yunsong Yang (Huawei Technologies): agree with Joe, in future, in a LAN area, in a mall, different vender compete the same service.

Mike Montemurro (BlackBerry): no way for the STA to know the target MAC address.

**Recess**

Meeting is recessed at 11:37 until PM1 on Wednesday May 14th, 2014.

**Wednesday, May 14th, 2014, 13:30 to 15:30 (PM1)**

**Call to order**

Meeting called to order on Wednesday, May 14th, 2014 by TGaq Chair, Stephen McCann, at 13:30.

**Agenda**

The chair showed the week’s agenda (802.11-14/0480r3).

Three presentations in the agenda.

* Service Indication Consideration of 802.11aq [11-14-0667r0]
* Security and Privacy Consideration of 802.11aq [11-14-0668r0]
* Pre-Association Discovery Protocol [11-14-0657r0]

**The agenda 11-14-0480r3 was approved.**

**Presentation by Dapeng Liu (CMCC) on “Service Indication Consideration” (11-14-0667r0)**

Dapeng Liu from CMCC presents the document. The document discusses the possibility to use JSON as service indication.

Mike Montemurro (BlackBerry):even using JSON you need client side software?

Dapeng Liu (CMCC):yes, but the client side software can be designed to provide enough flexibility to support new service without software upgrade.

Joe Kwak (InterDigital): there are three types of service indication. which one it belongs to?

Dapeng Liu(CMCC):the full text type.

Joe Kwak (InterDigital): there are three types of service indication can provide enough flexibility.

Chair:the draft text is open, you can try to provide text to add JSON format in the document.

**Presentation by Dapeng Liu (CMCC)on “Privacy and Security Consideration of 11aq” (11-14-0668r0)**

Yunsong Yang (Huawei Technologies): can you explain more of the access list?

Dapeng Liu (CMCC): Similar the access control list of router.

Mike Montemurro (BlackBerry):Service hash can solve the problem.

Chrunk (Aruba network): clarify about the problem?

Chair: HS2.0 can solve the no credential problem. how to provide the access list?

Dapeng Liu(CMCC): could be manual configured.

**Presentation by Mike Montemurro (BlackBerry)on “Pre-Association Discovery Protocol” (11-14-0657r0)**

Mike Montemurro from BlackBerry presents the document.

Liang Jin(Spirent): page 4: why we have the Bluetooth service discovery here?

Yunsong Yang (Huawei Technologies):

* + Page 4: table 8-402aq: what is the service identify number? Where it is defined?
		- Stephen McCann (BlackBerry): free form string. Human readable string.
	+ Page 5: section 8.4.6.2.1 :why is the service type here
	+ Mike Montemurro (BlackBerry): do not remember.
	+ Chair: service category.
	+ Mike Montemurro (BlackBerry): service hash is different from service type. Service type can provide the types of service. The hash is optional.
	+ Page 5, figure 8-405, the SD list is optional?
	+ Mike Montemurro (BlackBerry): yes. Could be zero.
	+ Do not want to force you to agree my comments before I support the document.
	+ Page number 6. why the length is fixed 4 octet?
	+ Yunsong Yang (Huawei Technologies): should be protocol specific.
	+ Mike Montemurro (BlackBerry): agree.
	+ There are two sets of figures of PAD request? Could be possible to use one set of figure?
	+ Mike Montemurro (BlackBerry): we could.
	+ Page number 7, figure near the bottom. What is the length filed?
	+ Mike Montemurro (BlackBerry): It is the container part.
	+ Yunsong Yang (Huawei Technologies): Suggest to re-arrange the length.
	+ Mike Montemurro (BlackBerry): agree
	+ Page number 8, in the middle of the text. Suppose to do more than transport service id?
	+ Mike Montemurro (BlackBerry): that sentence is in the wrong place. Need clean up.
	+ What is the different between implemented and activated?
	+ Mike Montemurro (BlackBerry): it is implemented but can be disabled.

Joe Kwak (InterDigital):We could spend next two weeks to understand the draft. we can be able to come out to something that the initial draft. Mike has done a great job to incomparable all the good idea. first effort to let the group focus on the draft. First we need to have something we can focus and study what is the missing. This should be a good start point for the group. We should have a motion/straw poll to let the editor to work on this. Suggestion to editor: keep word format, we can keep the change track.

Dan Gal (Alcatel-Lucent): my recommendation is to the chair instruction from the chair to adoption this draft incorporate into the draft already created. This draft is missing some element. The section number is using, what is your base line document? If someone wants to propose changes to the MC please provide the version. try to finish the document and try to post it on mentor. New contribution should be based on this document.

Chair: Agree.

Chair: draft should be in the member area. Individual proposal could in the mentor. Develop the schedule of the draft.

Chair: if there anything to stop this document been adopted? Will create the motion.

**Motion: Adopt document 11-14-0657r0 as text that will go into the TGaq draft and request the editor to create D0.01 from it.**

* + - * + **Moved by: Mike Montemurro**
				+ **Second: Dan Gal**
				+ **Result: Yes/No/Abstain: 9/0/1, motion passes**

Chair: Plan for tomorrow session. There is a presentation from Joe. Discuss time line, teleconference.

**Recess**

Meeting is recessed at 14:57 until AM2 on Thursday May 15th, 2014.

**Thursday, May 15th, 2014, 10:30 to 12:30 (AM2)**

**Call to order**

Meeting called to order on Thursday, May 15th, 2014 by TGaq Chair, Stephen McCann, at 10:30.

**Agenda**

The chair showed the week’s agenda (802.11-14/0480r4).

Two presentations in the agenda.

* ANNEX-Text-PAD-Protocol-for-ANDSF [11-14-0685r0]
* Service-Transaction-Protocol-for-ANDSF [11-14-0158r2]

**The agenda 11-14-0480r4 was approved.**

**Timeline Update**

* approval of APR and 5C November 2012
* initial TG meeting, January 2013
* working group letter ballot Nov 2014
* Re-cir working group letter ballot: May 2015
* Form sponsor ballot pool: July 2005
* Initial Sponsor Ballot: Nov 2015
* Sponsor ballot re: may 2016
* Final EC approval July 2016
* RevCom approval July 2016

**Presentation by Joe Kwak (InterDigital):on “Service Transaction Protocol for ANDSF ” (11-14-0158r2) and “ANNEX Text PAD Protocol for ANDSF” (11-14-0685r0)**

Joke Kwak from InterDigital presents the document.

* PPT version of ANDSF example. Show how to use 11aq with ANDSF. Add security notes. Slide 15/16 shows example flow chart.
* 0685r0 is the text version of the ppt. its intent is to add to the draft as informative annex as usage example.
* Rob (Huawei): figures 8.3: what is the TLS hello? TLS usually multiple round trip. if you get ANDSF police, later you change your IP address, how do you keep the continuity? 3GPP everything is based on tunnel. Changing IP address may have a issue. how do you get the limited IP address? How do you think the security. if there is no security why you use TLS?

Joe Kwak (InterDigital): this is the standard TLS procedure defined in IETF. It is share key set up. ANDSF set up is not based on IP addresses. The goal is to improve pre-associate discovery, there is no security. TLS is required by ANDSF.

Santosh Pandey (Cisco Systems): why use ANDSF other that other well know discovery protocol? it is strange , if you can connect ANDSF server there, why you need to ... concern is have an access to the network by unassociated device. I am against this example in annex. I have technical concerns.

Joe Kwak (InterDigital): there is an example use as an example. There is no other requirement. it is not about whether or not to implement it.

Dan Gal (Alcatel-Lucent): editor's comment. i do not like annex in annex. Can I change this? The figures in it can be edit?

Yunsong Yang (Huawei Technologies): page number 5: the bottom of text. AP recognizes the encapsulate is for the proxy? how does the AP know that? The security mechanism like FILS does. Not sure you fully meet the ANDSF security requirement end to end security connection. We should some example simple for annex example.

Joe Kwak (InterDigital): need a token in the message for the match. it is an example, it is not scandalize anything, jus showing the ability of 11aq.

Robert (Huawei): If I set up a vague ANDSF server. then set up a tunnel. ADNSF will tell the AP open door. I can attack by using a vague ANDSF.

Joe Kwak (InterDigital): you need authentication. AP, proxy, ANDSF need authentication.

Jing-Rong Hsieh (HTC): client here is dual mode terminal try to find ANDSF server. I wonder this STA can use 3GPP radio to query? it is will be quicker that Wi-Fi ANDSF discovery.

Joe Kwak (InterDigital): the use case for needing of this use case is quite limited. Sometimes you do not have a 3GPP connection. It maybe the corner case. I am not saying this is needed. we just showing if you want to do it, this is how you can do it.

Dan Gal (Alcatel-Lucent): if it is in annex, it is not guaranteed consistent with protocol. This just is one example.

Yunsong Yang (Huawei Technologies): I want to repeat the goal of this group. we should not create a protocol that is very chatty. this is not a good example, it is too chatty. I am not sure ready to support the draft.

Joe Kwak (InterDigital): we need to study all the examples. Some protocol will be chatty.

Chair: GAS has constrained of message exchange.

Mike Montemurro (BlackBerry): 11aq we are defining the transactions. We can prevent multiple transactions.

Chair: Jin, you are talking about dual mode terminal. it is out of scope. We cannot have this assumption. security part, AP between ANDSF, there is no security assumption in the STA? what state is the STA in? I do not see how the state machine works.

Joe Kwak (InterDigital): it is not associated state.

Mike Montemurro (BlackBerry): There is no Wi-Fi security link. There is STA ANDSF security link.

Robert(Huawei): capture portals is different than this one. It is not similar.

**Motion: Adopt document 11-14-0685r0 as text that will go into the TGaq draft and instruct the editor to create D0.01 from it.**

Santosh Pandey (Cisco Systems): I against this motion. I do not think this annex is useful. it will confuse the reader of this standard. I do not want to add anything not useful in the standard.

Carolyn (Ruckus): also against this motion. We need to come up to more examples then decide. too early to discuss adopt this.

Chair: you want a down selection process? Can you do that?

Carolyn(Ruckus): yes.

**Motion Moved by: Joe. Second: Mike**

**Result: Yes-No-Abstain: 1-11-8. Motion fails.**

**Teleconference**

Chair: teleconference schedule discussion. plan one teleconference between next meeting.

Dan Gal (Alcatel-Lucent): July is better.

Chair: Anyone against July 8th? No

Chair: plan for the July plenary meeting. More text proposals in July meeting.

**Chair: The chair adjourned the meeting at 11:36.**