IEEE P802.11
Wireless LANs

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|  TGbi Minutes Mixed Mode May interim Sessions 202413-17 May 2024 |
| Date: 2024-05-27 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
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Abstract

This document contains the minutes for the IEEE 802.11bi task group meetings that took place during the IEEE 802.11 Mixed Mode March session 13-17 May 2024. The on-site location for the meeting was Warsaw, (Poland).

Note: Highlighted text are action items.

Q – proceeds a question

A - proceeds an answer

C - proceeds a comment

Yellow highlight - action point

**Revision:**

R0: initial revision

**1rst slot : Monday May 13th 2024, 10:30 local time.**

**Chair: Carol Ansley, Cox Communications**

**Secretary: Stéphane Baron**

**Vice-chairs: Jerome Henry, Cisco; Stephen McCann, Huawei**

**Technical editor: Po-Kai Huang, Intel**

Chair calls meeting to order at 10:31 Local time.

Agenda slide deck: [11-24-0661r1](https://mentor.ieee.org/802.11/dcn/24/11-24-0661-01-00bi-tgbi-may-meeting-agenda.pptx):

1. Reminder to do attendance

Reminder to register for the session and to not attend the virtual meeting without paying appropriate meeting fees.

1. The chair mentioned the call for essential patents
	1. No one responded to the call for essential patents
2. Review of policies and procedures.
	1. IEEE individual process slides were presented.
3. The chair covered the IEEE copyright policy and participation rules.
	1. No questions
4. **Discussion of agenda 11-24-0661r1 (slide #16)**
	1. Discussion on agenda

Addition of document 24/553r4 to the agenda.

Addition of the 11-24/0604 and 11-24/0886 for tomorrow.

Regarding 11-24/0604 document, should have a r8 ready tomorrow for editorial discussion.

Addition of a discussion topic on MLD MACs and links

* 1. Adoption of agenda by unanimous consent (23 participants online, 18 in the room).
1. **Administrative**
	1. Remaining Meetings:
* Tuesday AM2
* Tuesday PM2
* Wednesday PM2
* Thursday AM1
	1. Approval of accumulated minutes:

447r0 (Mar. 7 telecon), 24/552r1 (March plenary minutes), 24/700r0 (Apr. 4 telecon), 24/701r0 (Apr. 11 telecon), 24/808r0 (Apr. 25 telecon), 24/809r0 (May 9th telecon)

Motion #42 moved by po-kai Wang and seconded by Jerome Henry

Motion approved by unanimous consent.

* 1. Vice chair election:

Stephen Mc Cann indicated he do not volunteer to continue as Vice chair.

Jerome Henry nominates to continue

Antonio nominates himself to candidate second vice chair position.

Chair made a last call for volunteer for vice chair nomination

 No answer.

Election of Vice chair: Jerome Henry and Antonio de la Olivia nominated.

Chair ask if there is any objection to elect Jerome and Antonio as vice chairs

Approved by acclamation.

Secretary confirmation: Stéphane Baron ask to continue, approved by acclamation.

1. **Technical Submissions**
	1. MLD MACs and Links Discussion

Question is that MLD defined a upper MAC called MLD MAC, but other MAC addresses exists on each link.

Should we need to change all the links and the MLD Mac address? Is there a timing issue or any other reason?

C: I think MLD address is never sent in clear so we do not need to change it.

C: This address can be sent in clear during TDLS process.

C: This address can be sent in group address frames.

C: previous discussion assumed that the MLD MAC address will be send and needs to be changed. In addition, this is sent in clear during the initial association.

A: agree but after initial association, this address is not sent in clear except for TDLS but this doesn’t allow a Station to be tracked.

C: Another discussion is around the DS address. I would think that it is ok to change MLD MAC at the same time but not the DS MAC address.

C: In my view DS mac address is tide to the MLD Mac, and are protected, so I don’t see the privacy leak here.

C: just a reminder that 11bh is 11bi baseline and we have to take into account IRM stuff.

Q: A remaining question, is: Should we rotate the MLD and associated STAs at the same time?

A: We should keep the OTA MAC address changing, and not keeping the same MLD MAC address.

C: there is an issue regarding the encryption of the payload. Encrypted Payload remains the same between retransmission even if they are retransmitted on a different link. So, retransmission can be correlated between links. If you change parameters at different time while retransmitting data, you can correlate old and new MAC addresses crosslinks.

Q: Agree with this problem, but I don’t know what is the most complicated between synchronizing the MAC address change and hiding the MLD structure.

Q: Is the MLD structure hidden?

A: I think the MLD structure is not protected. AP disclose its MLD structure so at least people know this structure exists. Regarding stations, if an eavesdropper correlate retransmission between links it can discover the STA MLD structure quite easily.

* 1. [24/0553r40](https://mentor.ieee.org/802.11/dcn/24/11-24-0553-00-00bi-proposed-spec-text-for-frame-anonymization-functions.docx): Proposed spec text for Frame Anonymization functions: Phil Hawkes

New presentation after offline discussion

* + 1. Discussion

Q: Now that we clearly deal with MAC Header issue, is there any other need for a frame anonymization stuff like AID obfuscation to handle in this chapter?

A: My initial though is no. Frame anonymization cover the header and the AID anonymization. So, since AID is not part of the header, we do not need to consider it in the MAC header chapter.

C: Editorial remark: remove the “i.e” stuff and clearly indicate requirement things or put it in a note format if it not a requirement.

Online modification is made accordingly on the document. Editor creates D0.5.

Q: This text seems stable, when do you want to request a vote on this?

A: I realize some text needs to be updated, but would like to have this text in D1.0.

C: regarding the frame anonymization. As long as we have the same frame structure, we can correlate so I think additional work on frame payload can be done.

Q: It seems that you have an offset per MLD, can it be link specific?

A: Technically yes, but not sur this is the best idea since for SN, we may end up with a lot of different values depending on number spaces. This will increase the complexity and memory size, but that is just and initial response, we need to discuss more on that.

C: I think it would be beneficial to have station operating on links being seen as independent.

C: using “minus” for applying the offset, may end up with negative value that may create implementation issue. I think it is easier to use “plus” instead, to avoid issue.

A: Agree.

Author modify text accordingly online.

C: I think in 11bi, we protect a part of the payload (like AID), and payload protection will be in another presentation. So, I think this document only cover SN/PN and MAC anonymization.

Q: I do not see the need for the TXOP rule. We should have an EDP Epoch rule.

A: The problem is that during the transition period, a TXOP holder shall not transmit frames with old (for retransmission) and new fresh frame using new parameters.

C: Regarding the offset per link, this is much more complex from implementation point of view. As an example, retransmission of same frame on different links, may be a challenge to implement even if it would be technically possible to design the protocol accordingly. First do it simple.

C: I don’t think changing Epoch during TXOP is feasible. But I don’t know if we need to mention it here.

A: This is a good point and we can indicate it here.

A : Maybe we should give the TXOP back before the start of the epoch.

C: Another point is that very quickly changing the epoch will create big issues regarding TXOP handling.

C: I think that there is some wording in 11-24/0604 saying that the EDP epoch should not start in middle of TXOP so you do not have to indicate it here.

C: About MLD specific anonymization, I think link specific would be easier for the first draft.

C: I agree for UL retransmission, but we should not put such rules for DL.

C: I think we shouldn’t encourage to use the old parameters for new frames. Even if such behavior can happen in some implementation.

A: I agree for the DL part, we should only rule on emission, but may depend on implementation.

C: This rule only applies during the transition period, right? So, we may add this mention, or have a dedicated chapter for transition period.

A: Ok, so let’s remove that part from the document, and let’s discuss for a later session.

C: I support having a dedicated chapter dedicated to transition period that is a complicated period.

1. Other businesses

No other business.

1. Chair recess the meeting at 12:26 local time

**2nd slot : Tuesday May 14th 2024, 10:30 local time.**

**Chair: Carol Ansley, Cox Communications**

**Secretary: Stéphane Baron**

**Vice-chairs: Jerome Henry, Cisco; Antonio de la Oliva, Interdigital**

**Technical editor: Po-Kai Huang, Intel**

Chair calls meeting to order at 10:35 Local time.

Agenda slide deck: [11-24-0661r2](https://mentor.ieee.org/802.11/dcn/24/11-24-0661-02-00bi-tgbi-may-meeting-agenda.pptx) :

1. Reminder to do attendance

Reminder to register for the session and to not attend the virtual meeting without paying appropriate meeting fees.

1. The chair mentioned the call for essential patents
	1. No one responded to the call for essential patents
2. Review of policies and procedures.
	1. IEEE individual process slides were presented.
3. The chair covered the IEEE copyright policy and participation rules.
	1. No questions
4. **Discussion of agenda 11-24-0661r2 (slide #16)**
	1. Discussion on agenda

No discussion

* 1. Adoption of agenda by unanimous consent (17 participants online, 11 in the room).
1. **Administrative**
	1. Remaining Meetings:
* Tuesday PM2
* Wednesday PM2
* Thursday AM1
1. **Technical Submissions**
	1. [11-24/0796r0](https://mentor.ieee.org/802.11/dcn/24/11-24-0796-00-00bi-aid-discussion.pptx) - AID Discussion - Carol Ansley

Presentation made by Carol.

This document describes addition of some bits, to the AID encoding, to the number of available AID values. The goal is to use 12 bits AID to solve issues introduced by some 11bi mechanism that will require multiple AIDs per STA (transition period, AID per link, etc.)

* + 1. Questions

C: AID is used is many places it is difficult to see if it breaks anything.

C: AID is used by default in replacement of MAC address because it is shorter.

C: There is also an AID 13 existing currently.

C: On slide 5: if we consider one OTA AID per link, the problem is even stronger.

C: AID bits are in other frames like trigger frame and only 11 bits are available there.

Q: using a flag indicate old AID, gives indication to eaves dropper, so why not using it all the time?

Q: For option 2, you have no indication to the eavesdropper, but indicating a 12 AID indicates EDP Stations?

A: The fact that a STA is an EDP stations is visible even without this, except if we decide to fake out association frames.

C: AID11 is used for DL PPDU, no big issue here, but for trigger frames AID12 is used and shall not trigger 2 different stations thus generating collisions.

C (chat): Some messages do use AID12/AID13 already, so it has already been used for some features/specifications (SIG1 related for example), so the interactions may be large.

C: For retransmission and transition period, we may use a specific flag.

Q: For trigger frame, I wonder if adding a bit to the AID is the best way to signal it?

C: I think trigger frame is the one that is really critical from AID collision point of view. Other kind of collision we can live with it.

Q: Regarding trigger frames the question is to know if we can trigger EDP and legacies in a single trigger frame?

C: I think we can trigger mix legacies and EDP stations.

C: regarding power saving and TIM, I think we can use AIDs as they are, if there is no collision between old and new AID.

No more question.

* 1. [11-24/0886r0](https://mentor.ieee.org/802.11/dcn/24/11-24-0886-00-00bi-the-need-for-group-signaling-of-aids.pptx) – The need for group signaling of AIDs -- Antonio de la Oliva

Presented by Antonio.

The document studies the impact of sending AIDs to the STAs or having an algorithm based self-generation.

Document propose a mechanism to let station self-defining AID and then solve collision by sending AIDs from the AP.

* + 1. Discussion

C: The need for a range of assignment of AID is not limited to EDP, APs implementation use t to handle station according to their type for instance.

Q: what is the impact of adding a restriction for the AID range selection?

A: I didn’t study it, but if an AP handled 2000 STAs you do not have ranges.

A: I think we can solve the problem by providing a seed per group to compute different AIDs values.

Q: Did you consider AID bit map compression signaling?

A: No, I didn’t study it. I think we need a way to signal the station and carefully study it.

Q: I agree with your approach. So, the question is what happen if there is collision?

A: One way is to notify a collision. Instead of signaling all the AIDs, just signal the colliding ones.

C: If we go to STA specific identifier, having more bits than 11 makes more sense and reduces the collision probability.

A: For the purpose of this group, the ideal thing is to have a new AID, but considering the amount of change required we may break the timeline.

Q: Simulation results are based on the second solution, right?

A: yes.

Q: So, the document describes the impact if we go to option2 ?

A: Here, we show impacts of the number of STAs on the second solution, while knowing the overhead of option 1 signaling.

C: If we go for option 1, there is no conflict, so no problem on that point and we can focus on signaling.

A: Here we are considering the signaling reduction since we only consider signaling for collision.

C: Currently the way I see it, is a continuously indication of collision among time when you have a large number of STAs.

A: If the algorithm run in parallel in APs and STA, then the AP can anticipate collisions, and multicast the AIDs.

C: Multicast is not a safe solution and groupcast is a very dangerous way to go.

C: One solution can be to encrypt this AID field, or to have a different field making current AID field meaningless for legacy stations.

A: If the solution is not beacon based, the additional overhead will be huge to signal all the AIDs.

C: We may need to have a radical approach potentially by not handling AID as other parameters.

Q: You use a random generation so you know how many collisions but not the colliding STAs?

A: The simulation knows, and we can evaluate the number of iteration to have non colliding AIDs, or how to group to reduce collision probability.

Q: Do you consider randomizing or offset?

A: I consider a random offset based on a seed the AP can control.

No more question.

* 1. [11-24/0915r0](https://mentor.ieee.org/802.11/dcn/24/11-24-0915-00-00bi-aid-anonymization-scheme.docx) – AID Anonymization Scheme – Jerome Henry

Presentation made by Jarkko Kneckt

Document presents a mechanism to generate the AID locally without signaling between AP and STAs. The proposal is to have AID computation locally and from time-to-time AID assignment from the AP.

* + 1. Discussion

Q: You can have AID collision in case of initial AIDs range smaller that the AID range for generation.

A: Yes , we may need to add rules to avoid this case.

Q: You consider sending AID less frequently than AID change, right?

A: yes.

Q: I think first mechanism (sending AID) is needed, while the second mechanism (generating AID) is weak with regards to the insider attack.

A: This mechanism is based on group, so this limits the insider attack, and AID assignment is there to limit the insider attack.

C: My point is that, all we need is the AID assignment. All other mechanisms need to show their benefits.

A: The benefit is to fight against eavesdroppers that are not associated. But I agree that the insider attack remains possible here.

C: If you give same offset to a large number of STAs, then it is possible for an eavesdropper to determine the offset.

Q: How an eavesdropper can determine the group offset?

A: By analyzing the traffic in case of dense traffic if all AIDs are used. In that case, assigned AID pattern, will be shifted by the offset.

C: The only way to handle that would be to hide the number of changes to avoid determining a pattern and then determine the offset.

Q: What is the range size we are discussing here?

A: It depends on the groups size.

Q: How to solve the difference between legacies and EDP may be harmful since, in the future, legacies may disappear.

A: Right.

Q: Is the offset parameter for all STAs in the BSS or for group?

A: This is group specific.

1. Other businesses

No other business.

1. Chair recess the meeting at 12:26 local time

**3rd slot : Tuesday May 14th 2024, 16:00 local time.**

**Chair: Carol Ansley, Cox Communications**

**Secretary: Stéphane Baron**

**Vice-chairs: Jerome Henry, Cisco; Antonio de la Oliva, Interdigital**

**Technical editor: Po-Kai Huang, Intel**

Chair calls meeting to order at 16:01 Local time.

Agenda slide deck: [11-24-0661r3](https://mentor.ieee.org/802.11/dcn/24/11-24-0661-03-00bi-tgbi-may-meeting-agenda.pptx):

1. Reminder to do attendance

Reminder to register for the session and to not attend the virtual meeting without paying appropriate meeting fees.

1. The chair mentioned the call for essential patents
	1. No one responded to the call for essential patents
2. Review of policies and procedures.
	1. IEEE individual process slides were presented.
3. The chair covered the IEEE copyright policy and participation rules.
	1. No questions
4. **Discussion of agenda 11-24-0661r3 (slide #16)**
	1. Discussion on agenda

No discussion

* 1. Adoption of agenda by unanimous consent (27 participants online, 12 in the room).
1. **Administrative**
	1. Remaining Meetings:
* Wednesday PM2
* Thursday AM1
1. **Technical Submissions**
	1. [11-24/0604r8](https://mentor.ieee.org/802.11/dcn/24/11-24-0604-08-00bi-periodic-frame-anonymization.docx) - Periodic Frame Anonymization -- Jerome Henry

New presentation made by Jerome after offline discussion to make document converge between different contributions.

Main update is related to the conditional belonging to the default group if the optionalStation’s Minimal Epoch Pacing element, exchanged during association, is compatible with the Default group characteristics.

Clarification of the transition period timer: one margin before the Epoch starts and Epoch transition duration after the EDP Epoch start.

* + 1. Questions

C: I think the group Epoch should be mandatory because otherwise what do we have?

C: Transition should be longer.

A: Default value is 3 TBTTs.

A: So this is ok.

C: I think this feature shall not be mandatory because this requires hardware support. This doesn’t mean this will not be implemented.

C: Group Epoch interval is a value plus a unit. You need to clean the usage or add two different names: Group Interval Length and Group Epoch Interval duration.

Q: Can we change the minimum 1s duration to 1 minute?

A: For now, it is 1s, but we have a comment collection in front of us and other values can be connected.

C: I cannot support the mandatory requirement, so I prefer current version.

C: I speak in favor of having this 1s minimum duration. This is a feature we can demonstrate to the end user and to the market.

C: The field “Current Epoch Number” shall be reserved for now since its usage is not described for now.

A: OK.

C: Regarding the collision status, I would prefer to have a table.

A: Agree.

Author request a straw poll regarding the feature being mandatory versus optional

**SP#1 text:**

Do you support:

A: Group EDP Epoch support is optional for the CPE AP MLD and the CPE non-AP MLD

B: Group EDP Epoch support is mandatory for the CPE AP MLD and the CPE non-AP MLD

**SP#1 result**: A(optional): 23 / B (Mandatory): 7 / No answer :13.

Author request another straw poll on the minimum duration to gather opinion of the group between a minimum of 1s and 60s. The granularity being 1s.

C: Can we have an intermediate choice like 10s?

A: Agree

Q: Can we have multiple choice?

A: Ok.

**SP#2 text:**

Do you support:

A: A minimum Epoch duration of 1 second.

B: A minimum Epoch duration of 10 second.

C: A minimum Epoch duration of 60 second.

**SP#2 result**: A(1s): 14 / B(10s): 13 / C(60s): 19 and 18 no answer

Author then indicate it will maintain “TBD” in the text for now to allow offline discussion.

C:it would be beneficial to have objective data on the gain in term of privacy versus the cost in term of implementation.

Since around 1 hour remains, chair calls for additional presentation.

Document 11-24/0553r5 is then added to the agenda.

* 1. [24/0553r5](https://mentor.ieee.org/802.11/dcn/24/11-24-0553-05-00bi-proposed-spec-text-for-frame-anonymization-functions.docx): Proposed spec text for Frame Anonymization functions: Phil Hawkes

New presentation after last presentation comments.

Mainly editorial (modulo notation).

* + 1. Discussion

C: to be consistent with REVme, put parenthesis around OSN +Offset and no parenthesis around modulo.

A: ok.

Author make the modification online and create r06.

Author then request a straw poll to check that nobody object to integrate the document in the future draft D0.4.

Q: Does this document says anything around the block ack?

A: Chapter 10.71.5.2 is related to block ack score boarding.

A: ok this looks good.

Q: Where does the Offset values come from, is it per station?

A: the computation is not defined yet in the document. But the offset is per station.

A: OK.

C: reference to the retransmission chapter should be removed.

A: OK.

After those final modification, doc r06 is uploaded and the straw poll is run

**SP#3 text**: Do you support adding document 11-24/0553r6 to the next draft?

Y/N/Abstain

SP#3 Result: Yes: 23/ No: 0/ Abstain:7 and 16 no answer.

Chair indicate next session will be tomorrow PM2.

1. Other businesses

No other business.

1. Chair recess the meeting at 17:26 local time

**4th slot : Wednesday May 15th 2024, 16:00 local time.**

**Chair: Carol Ansley, Cox Communications**

**Secretary: Stéphane Baron**

**Vice-chairs: Jerome Henry, Cisco; Antonio de la Oliva, Interdigital**

**Technical editor: Po-Kai Huang, Intel**

Chair calls meeting to order at 16:02 Local time.

Agenda slide deck: [11-24-0661r4](https://mentor.ieee.org/802.11/dcn/24/11-24-0661-04-00bi-tgbi-may-meeting-agenda.pptx) :

1. Reminder to do attendance

Reminder to register for the session and to not attend the virtual meeting without paying appropriate meeting fees.

1. The chair mentioned the call for essential patents
	1. No one responded to the call for essential patents
2. Review of policies and procedures.
	1. IEEE individual process slides were presented.
3. The chair covered the IEEE copyright policy and participation rules.
	1. No questions
4. **Discussion of agenda 11-24-0661r4 (slide #16)**
	1. Discussion on agenda

No discussion

* 1. Adoption of agenda by unanimous consent (29 participants online, 12 in the room).
1. **Administrative**
	1. Remaining Meetings:
* Thursday AM1—review doc status for comment collection
1. **Technical Submissions**
	1. [11-24/0550r1](https://mentor.ieee.org/802.11/dcn/24/11-24-0550-01-00bi-tx-power-randomization.pptx) -- Tx Power Randomization -- Ugo Campiglio

Presented by Ugo.

The document is an update of previous revision presented during last plenary meeting.

The document answer concerns received about performances impact of the proposal.

* + 1. Questions

Q: For option 1 other alternatives exist than a centralized decision.

A: The AP has a better place to determine need for obfuscation.

 Q: The range of adjustment can be small if I want to keep my MCS, so I am afraid performances may be impacted. So, it will complicate the best performance achievement. If we really want to do it, I would prefer to let the stations decide.

C: We may add a sentence to indicate that the station can monitor the RSSI and take action if needed.

A: depending on the MCS you have a margin, but even small variation makes a difference from an eavesdropper point of view.

Q: If I vary the power, I will be more prone to error, so you change the trade-off performance vs TX power.

C: Definitely we should let this type operation to the station. PHY guys are very sensitive to have the maximum margin.

C: Station location is an important info, and I think we need to think about it.

Q: How many variations to you plan?

A: I don’t have a number but it can be very small, but it depends on the environment.

C: Even for a stationary station the RSSI change a lot, so a little change like 0.5 DBm may change the eavesdropper analyze.

C: I am currently monitoring my RSSI at 1.2m of the AP, while not moving and the variation is by far much more than 0.5DBm, so you need to apply a substantial power change in order to change significantly the RSSI range.

A: If you are not close to the AP, this variation is much lower.

 C: I would like to echo previous comment, because I think that from a sniffer point of view, I don’t find it too realistic to have no RSSI variation.

Q: How far does EDP should go? Should we also consider PPDU size change?

A: There are other PHY parameter I think we should consider. I started by the RSSI that is quite simple to understand.

C: If you have few stations and stationary position, RSSI may be stable, but in this case, it is quite easy to identify the topology regardless of RSSI monitoring.

C: Regarding the data size, we may or may not address this point, so we may consider it.

C: You may have individuals that accept to reduce performances because they are very cautious about privacy.

C: For a battery-operated stations, I am not sure those stations agree to reduce power. So, I think a lot of stations will not use the scheme even if it is available.

Author defers Straw polls to allow offline discussion.

* 1. [11-24/0762r1](https://mentor.ieee.org/802.11/dcn/24/11-24-0762-01-00bi-proposed-spec-texts-for-key-creation-using-authentication-frame-for-802-1x.docx)-- Proposed spec texts for key creation using authentication frame for 802.1X -- Po-Kai Huang

Presentation by Po kai after last presentation and received comments.

Po kai presents the changes compared to previous revision.

Removal of the IETF reference, provide more precise definition of the pairwise key extension.

* + 1. Questions

Q: In draft D0.3 there is an EDP key and use authentication to derive the key, what is the relationship?

A: The reason why I am not using it is related to the number of messages in the tunnel EAP, and I think increasing the number of messages is not the way to go.

Q: If we include this document, we will have different key generation mechanisms?

A: I think of it and my conclusion is that tunneling a tunnel is not the way to go. But in SAE we have 3 messages

and in this case having a specific mechanism make less sense.

Chair ask author intention, to run SP or continue discussion.

Author indicated he wants to run a SP since he answered the questions.

**SP#1: text**: “Approve directing the Editor to add the text from 11-24/0762r2 to the next TGbi draft?

Y/N/A

**SP#1 result**: 16 yes /2 no /11 abstain no answer 19

Since lots of time remains, an author request to present a new document: 24/0930r0

Chair ask if there is any objection to present this document.

No objection

* 1. [11-24/0930r0](https://mentor.ieee.org/802.11/dcn/24/11-24-0930-00-00bi-traffic-indication-bloom-filter-tibf.pptx) : Traffic Indication Bloom Filter: Phil hawks

Presented by Phil.

The document presents a proposal for a supplement to the TIM with a Traffic indication

Bloom Filter (BF) to anonymize the TIM by answering if the AID is not in the set.

The filter being computed from the KDK is added to the TIM for the EDP stations.

BF is a probabilistic filter providing Definitely no / possibly yes answer.

* + 1. Questions

Due to lack of time, the Q&A session is deferred to next session (Thursday AM1).

1. Other businesses

No other business.

1. Chair recess the meeting at 17:48 local time

**5th slot : Thursday May 16th 2024, 08:00 local time.**

**Chair: Carol Ansley, Cox Communications**

**Secretary: Stéphane Baron**

**Vice-chairs: Jerome Henry, Cisco; Antonio de la Oliva, Interdigital**

**Technical editor: Po-Kai Huang, Intel**

Chair calls meeting to order at 08:02 Local time.

Agenda slide deck: 11-24-0661r5:

1. Reminder to do attendance

Reminder to register for the session and to not attend the virtual meeting without paying appropriate meeting fees.

1. The chair mentioned the call for essential patents
	1. No one responded to the call for essential patents
2. Review of policies and procedures.
	1. IEEE individual process slides were presented.
3. The chair covered the IEEE copyright policy and participation rules.
	1. No questions
4. **Discussion of agenda 11-24-0661r5 (slide #16)**
	1. Discussion on agenda

Due to presenter unavailability, 11-24/0930r0 Q&A session is deferred.

An author request 604r10 to be presented.

* 1. Adoption of agenda by unanimous consent (13 participants online, 8 in the room).
1. **Administrative**
2. **Technical Submissions**
	1. 24/0604r10

Presented by Jerome.

Just Q&A session after yesterday presentation

* + 1. Questions

Q: Editorial modification on Epoch pacing element.

A: thank you

C: This looks good for a first release. I think it is needed to make the document simpler during the comment collection.

A: Agree, this document is a first version, we can add timeline to explain, and description of the associated action frames will be added.

Chair then request if somebody object adopting this document 11-24/0604r11 to the first TGbi draft.

Nobody objects.

Chair then indicated this document is adopted to be added in the TGbi draft D0.4

Chair the request a motion to direct editor to create draft D0.4 based on approved documents.

Motion #43 moved by Jerome Henry and Seconded by Po-kai Wang

Chair as if there is any objection to approve this motion by unanimous consent.

No objection received, so motion #43 is approved by unanimous consent (17 people on line and 10 in the room)

**Motion#44 text**: Approve releasing Draft D0.4 for comment collection to the 802.11 Working group.

Y/N/A

**Motion#44 moved** by Po-Kai wang **and seconded** by Antonio de la Oliva

Since this is task group motion for comment collection, a count is needed.

**Motion #44 result :** Y:14 / N:0 / A:0 , 5 no answer.

**Motion #44 passes.**

Q: what should be the duration of the comment collection?

A: 30 days or 3 weeks looks reasonable for a first comment collection.

C: Editor: I think I need working on the draft for 2 weeks.

C: I am supporting 30 days.

C: I also support 30 days.

Q: Chair: How many telecon should we schedule?

A: I think at least two, one dedicated to the Q&A session for doc 11-24/0930r0, and another for comment allocation.

C: Can we avoid overlap with TGbn and potentially TGbp meetings?

A: I will do my best.

1. Other businesses

No other business.

1. Chair adjourn the meeting at 08:45 local time