IEEE P802.11
Wireless LANs

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| 802.11bi – Resolution to CIDs 1091 and 1092 |
| Date: November 12, 2024 |
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| 1091 | Julien Sevin | "A CPE non-AP MLD may request to join a group EDP epoch by sending an EDP epoch setting protected action request frame, containing the group ID that the non-AP MLD wishes to join. The EDP epoch setting protected action request frame is not specified | Please clarify the "EDP epoch setting protected action request frame" | REVISEDImplement changes in 1844r0~~Addressed in 24/1426 and 24/1623~~  |
| 1092 | Julien Sevin | "The AP MLD responds with an EDP epoch setting protected action response frame, accepting or rejecting the request". The EDP epoch setting protected action response frame is not specified | Please clarify the " EDP epoch setting protected action response frame" | REVISEDImplement changes in 1844r0 ~~Addressed in 24/1426 and 24/1623~~  |

## Discussion

* We need to conclude on a naming for the epoch. I have used group EDP epoch.
* We need to conclude if the epoch is managed per MLD or per affiliated AP/link
* The information about the group EDP epoch parameters can be sent by the MLDs using the EDP Group Parameter frames (or this is sent by the affiliated?). The info may also be sent in the beacons by the MLD? Or the affiliated?

## Proposed solution

***-- Editor modify through all the document –***

The epoch itself should be called group EDP epoch.

***-- Editor please make the following changes in clause 10.71.2.1 --***

**10.71.2.1 Introduction**

A CPE AP MLD and CPE non-AP MLD anonymizes selected OTA MAC Header fields of individually addressed frames of the CPE non-AP MLD **~~within EDP epochs~~**.

A CPE AP MLD signals support of the EDP epoch in beacons and probe responses. A CPE AP advertises at least a default EDP group and associated EDP epoch sequence parameters, and possibly other EDP groups and associated EDP epoch sequence parameters. A group EDP epoch has zero or more STAs as its members.

All CPE non-AP MLDs joining the BSS may be placed in the default group EDP epoch ~~by default~~ upon association (see 10.71.2.2 (EDP epoch request)) **or in a specific group EDP epoch if requested. A CPE non-AP MLD may request placement in a specific group EDP epoch by including an EDP element (defined in 9.4.2.337) in an encrypted (Re)Associations frames**. If a CPE non-AP MLD chooses **to request the formation of a new** ~~not to join any existing~~ group EDP epochs, it may send an EDP Epoch ~~Sequence~~ **Request** frame to the CPE AP MLD to **request the creation of** ~~create~~ a new group EDP epoch. If a CPE non-AP MLD chooses to **leave all group EDP epochs, it may send an EDP Epoch Request frame indicating it is leaving all group EDP epochs**.

A CPE non-AP MLD can request to leave any group and/or join a different group at any time **through the EDP Epoch Request frame**.

The CPE AP MLD advertises the group EDP epoch (sequence parameters as defined in 10.71.2.3 (EDP Groups), **using the EDP Group Parameter frame in 9.6.38.4**.

***-- Editor: Rest of the section is left untouched starting in the following paragraph which is not modified–***

The AP MLD advertises the EDP epoch (sequence parameters as defined in 10.71.2.3 (EDP Groups(#1113)). Each non-AP MLD applies the group EDP epoch sequence parameters of the group EDP epoch to determine the EDP epoch sequence of one or more EDP epoch start times….

***-- Editor please overwrite clause 10.71.2.4 with this text (Group EDP epoch setup) --***

**10.71.2.4 Group EDP epoch ~~setup~~ operation**

A CPE (#1079) non-AP MLD may include in its (Re)Association Request frame the Minimum (#1328, 1011, 1077) Epoch Pacing element. (#1026)

During association, the CPE non-AP MLD may include in encrypted (Re)Association frames an EDP element indicating the parameters for the EDP group epoch it desires to join. Within this EDP element, the CPE non-AP MLD may include a Minimum Epoch Pacing Parameters field (#1328), indicating the minimum Epoch interval length supported by the CPE non-AP MLD. If the value of the Group Epoch Interval Duration field included in the Minimum Epoch Pacing field is less than the value of the Group Epoch Interval Duration field for the default EDP Epoch group (group 0) or of any other group EDP epoch already created, then (#1063) the non-AP MLD is not assigned to (#1020) any group EDP epoch (#1063) at (re)association. (#1026). If no EDP element in included in the encrypted (Re) Association Request frame, or If the EDP element does not include information defining the parameters for the group EDP epoch, the CPE non-AP MLD is assigned to the default group (group 0) and should use the parameters provided in the Beacon frame for the default group.

The CPE AP MLD, upon reception of the EDP element in an encrypted (Re)Association Request frame may assign the CPE non-AP MLD to the group EDP epoch with parameters that best match the parameters requested. In all cases, the assigned group EDP epoch interval length shall not be shorter than the indicated in the Minimum Epoch Pacing Parameters field.

The parameters of the assigned group EDP epoch, are returned to the CPE non-AP MLD through an EDP element in the (Re) Association Response frame. (#1093, 1343) (#1065)(#1344).

The CPE non-AP MLD (or any of its affiliated STAs) may request to create a new group EDP epoch by sending an EDP Request frame with Epoch request field indicating “Create” and indicating the parameters for the group EDP epoch in the EDP Epoch Setting field.

The CPE AP MLD (or any of its affiliated APs) may create the new group with the received parameters. Alternatively, the CPE AP MLD (or any of its affiliated APs) may allocate the CPE non-AP MLD (or any of its affiliated STAs) to an already existing group with similar parameters. This may be signalled to the CPE non-AP MLD (or any of its affiliated STAs) in an EDP Response frame indicating in the Status field, SUCCESS\_SIMILAR\_EPOCH, and providing the EDP Epoch Setting field with the parameters of the group epoch. *(#*1013, 1014, 1015, 1062, 1066, 1115, 1167, 1170) Once the CPE non-AP MLD is associated (#1172) and has been assigned a group EDP epoch. It may desire to join a different group EDP epoch. Information on the available group EDP epochs is distributed periodically by the CPE AP MLD (or any affiliated AP) transmitting EDP Group Parameter frames (#1345). To join a different group, the CPE non-AP MLD (or any of its affiliated STAs) may send an EDP Epoch Request frame, indicating “Join” in the Epoch Request field and providing the EDP Epoch Setting field indicating the parameters of the group EDP epoch it desires to join. *(#*1013, 1014, 1015, 1062, 1066, 1115, 1167, 1170)

If the CPE AP MLD (or any of its affiliated APs) can fulfil the request, it will include the CPE non-AP MLD (or any of its affiliated STA) in the new group EDP epoch and remove it from the previous group EDP epoch. The result of the operation may be indicated to the CPE non-AP MLD (or any of its affiliated STAs) through an EDP Response frame. This frame may include a Status field indicating the operation result and an optional EDP Epoch Setting to indicate the parameters of the new joined groupAt any point in time, CPE AP MLD may request the associated CPE non-AP MLD to transition to a different group EDP epoch, by sending an EDP Request frame to the associated CPE non-AP MLD with EDP request field set to “Join” and including the EDP Epoch Setting field with the parameters of the suggested group EDP epoch. The CPE non-AP MLD may report the status of the operation by responding with an EDP response field.

A CPE non-AP MLD (or any of its affiliated STAs) may leave a group EDP epoch at any time, by sending an EDP Request frame indicating “Leave” in the Epoch request field. Upon reception of this message, the CPE AP MLD (or any of its affiliated APs) will remove the CPE non-AP MLD (or any of its affiliated STAs) from the group EDP epoch indicated in the EDP Request frame. *(CIDs* 1013, 1014, 1015, 1062, 1066, 1115, 1167, 1170)