# TGbc – Handovers in 802.11bc

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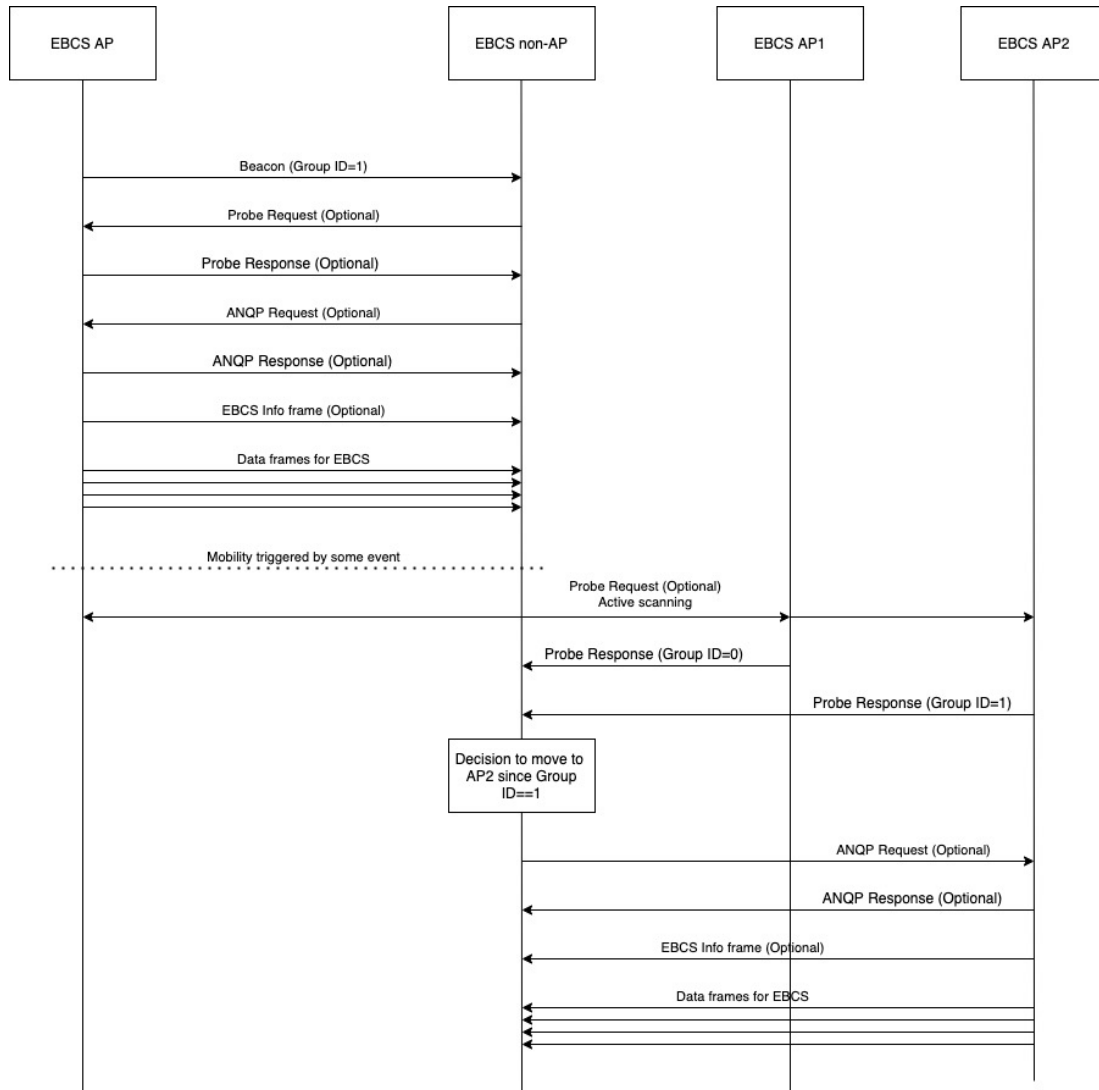| Name | Affiliations | Address | Phone | email |
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# Problem

- Associated and un-associated STAs may be receiving an EBCS traffic stream while moving across different APs.

- Several problems arise:
    - What neighbor AP is transmitting the EBCS traffic stream the STA is listening to
    - Content IDs may or may not be local to the AP (therefore need to listen to some indication of it)
    - Providing a list of neighbor APs increases substantially the overhead.
        - Consider 3 services, 4 APs, each AP needs to tx 4x48x3 bits (576bits).
    - A fixed list of neighbors per service is not flexible enough to accommodate dynamic EBCS.

# Possible solutions: the notion of Group ID

- **One possible way of providing a low overhead indication of APs broadcasting the same services is a Group ID**

- **Group ID: APs sharing the same Group ID are assume to have the same EBCS available.**
  - Group ID can be transmitted as part of the EBCS Parameter element (beacons)
  - Group ID can be for example an Octet, therefore not adding a large overhead to the discovery system.

- **Group ID will help STAs to discover neighbor APs which can provide the EBCS.**

# Example



- **STA starts receiving an EBCS traffic stream from EBCS AP**

- **This is done using standard procedure for un-associated STAs**

- **The STA notes that the EBCS AP belongs to group with Group ID 1.**

- **When moving, it scans for EBCS APs.**

  - Two EBCS APs are discovered, one with Group ID 0 and another with Group ID 1

  - STA known Group ID 1 will be able to provide the service, so it connects to it.

  - Since Content ID may be different, it needs to discover the service list through e.g., Enhanced Broadcast Services ANQP-element, and maybe request it (using ANQP Request).

  - It can also wait for EBCS Info frame

# Some other questions

- **EBCS Info frame provides information on the transmitted EBCS or the available EBCS?**

    - If an EBCS appears in the Info frame, do we assume the STA does not need to request for it?

    - If not, shall we signal that the EBCS is being transmitted?→maybe through a bit in the EBCS Info frame