[Idle mode operation for IEEE802.16m]

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Venue:

[Reply to IEEE802.16m-08/024]

Base Contribution:

[ ]

Purpose:

[Discuss and include the proposed text changes into SDD document]

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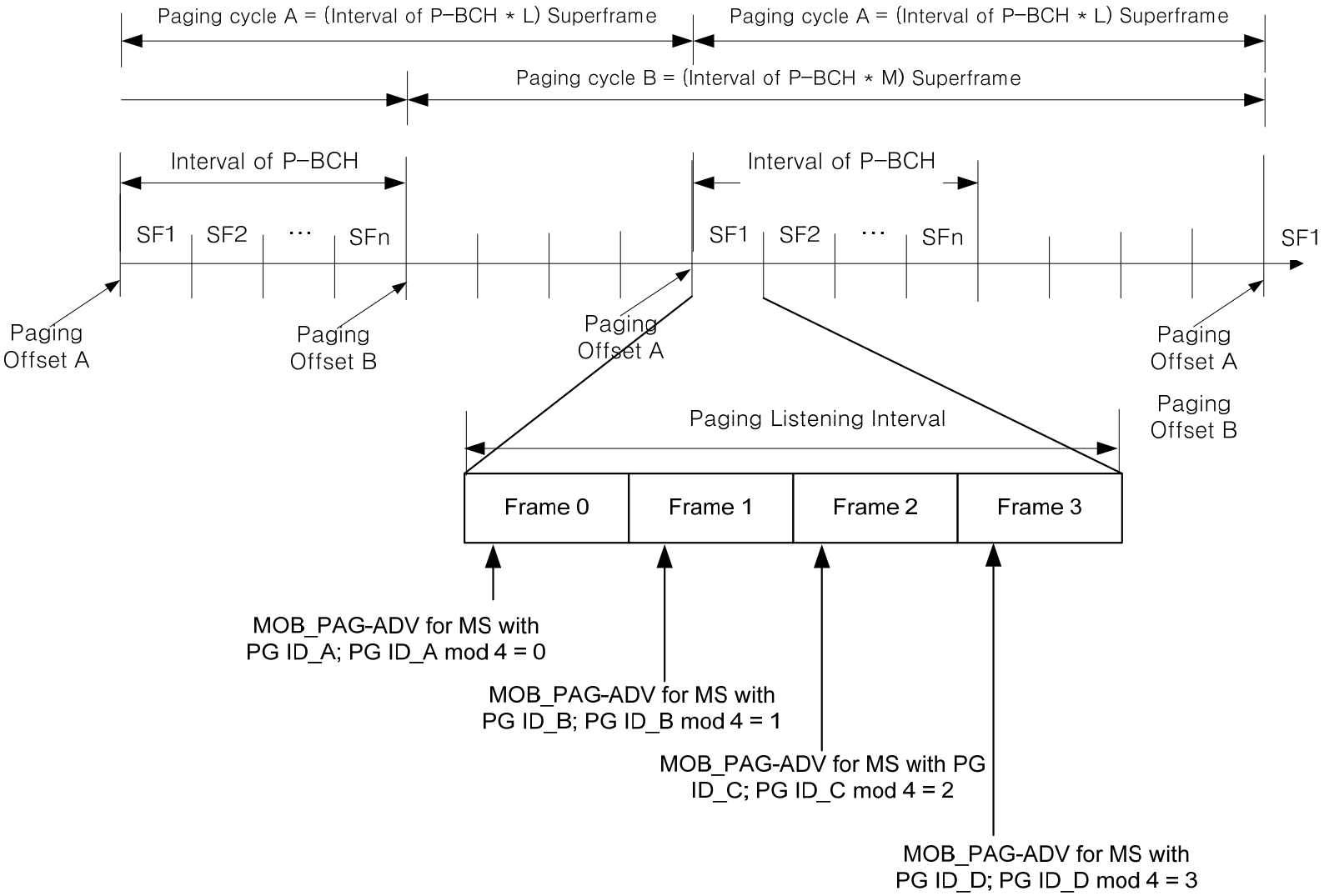
Design Principles

- **Maximizing power saving**
  - MS stays in idle state as long as possible
  - MS selectively monitors paging message during the paging listening interval
- **Minimizing paging overhead**
  - Reduce the size of Paging message
  - Decrease the number of Paging message at BS side during P-BCH period
  - No additional overhead for more power saving at the MS side

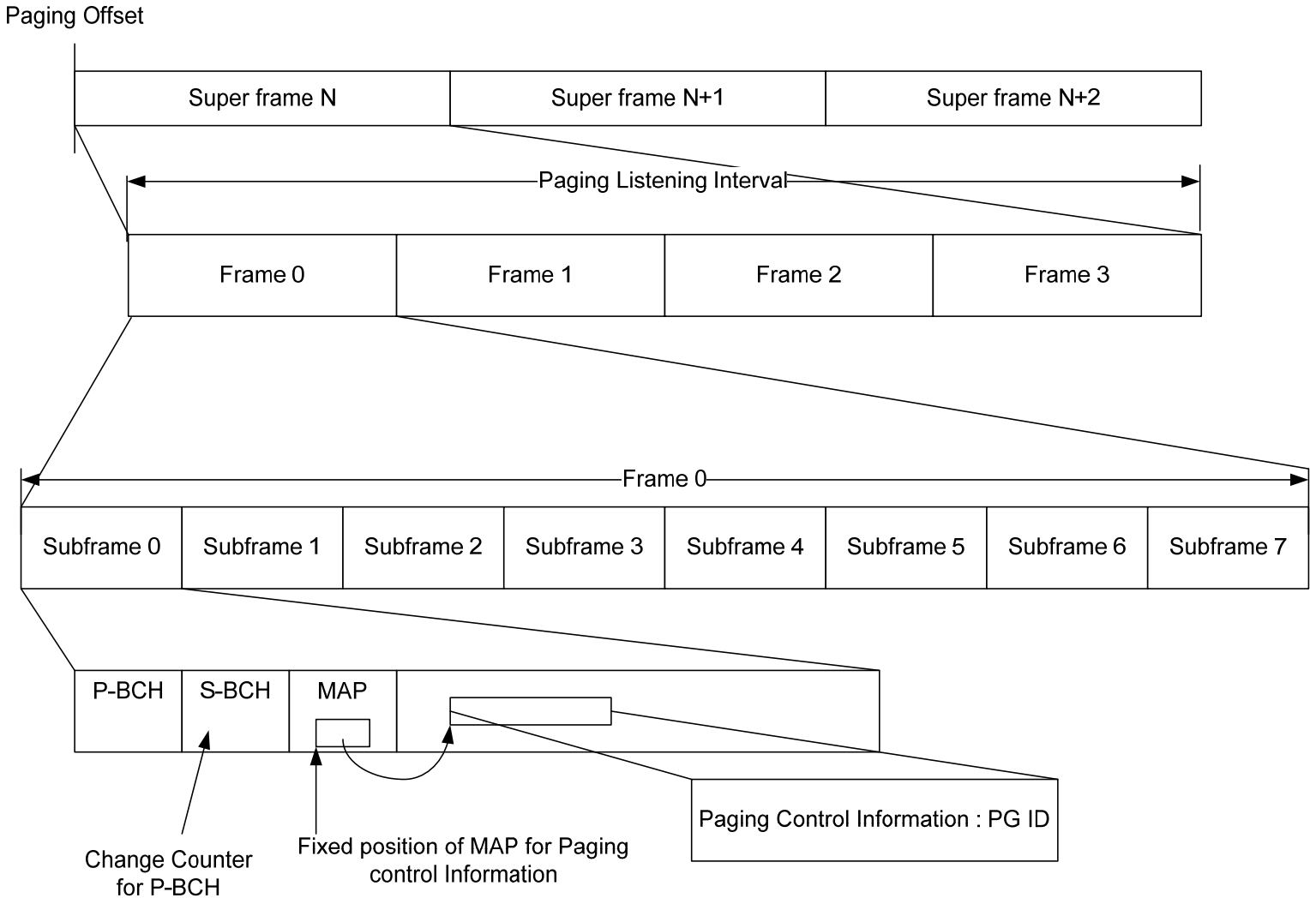
Basic Structure and Key Features

- Idle mode operation is aligned with Super frame. (4 frames)
  - The period of paging cycle is multiplication of BCH period.
  - Paging offset starts at the beginning of BCH period
  - Paging Listening Interval is equal to a Super frame
- Separation of Paging and Broadcasting information delivery
  - MOB_PAG-ADV message is transmitted on pre-determined frame
  - PG (Paging Group) ID separately broadcasts, ahead of MOB_PAG-ADVs, in the listening interval
- Determination of location for MOB_PAG-ADV in super frame
  - MOB_PAG-ADV message is transmitted on the specific frame determined with “PGID *modulo* 4 (# of frames in a super frame)”
  - MS monitors MOB_PAG-ADV message on the pre-determined frame during the listening interval

Basic Operation (1/2)



Basic Operation (2/2)



Conclusions

- **Maximizing power saving**
  - The frame for MOB_PAG-ADV message is pre-determined with PG ID
  - The specific location of the MOB_PAG-ADV message from the BS is determined with PG ID *modulo* 4 (Number of frames in a super frame)
  - MS stays in idle state as long as possible so that it can save power consumption since the MS selectively monitors paging message on the pre-determined frame during the paging listening interval
- **Minimizing paging overhead**
  - Transmission of Compact MOB_PAG-ADV message without paging group information
  - Decrease the number of Paging message at BS side

Proposed Text

- **Following Text should be included into SDD document**

---------- Start Text ----------

10.X Idle mode operation

To efficiently save power consumption of the MS, the MS selectively monitors the paging message. The specific position in the super frame for the reception of paging message is determined with paging group ID *modulo* 4(number of frames in the super frame). And the paging group information is separately transmitted on the first subframe of super frame

[TBD]