

Coordinated Interference Mitigation and Handover in Femtocells

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Re: Contribution in support of a comment on LB30

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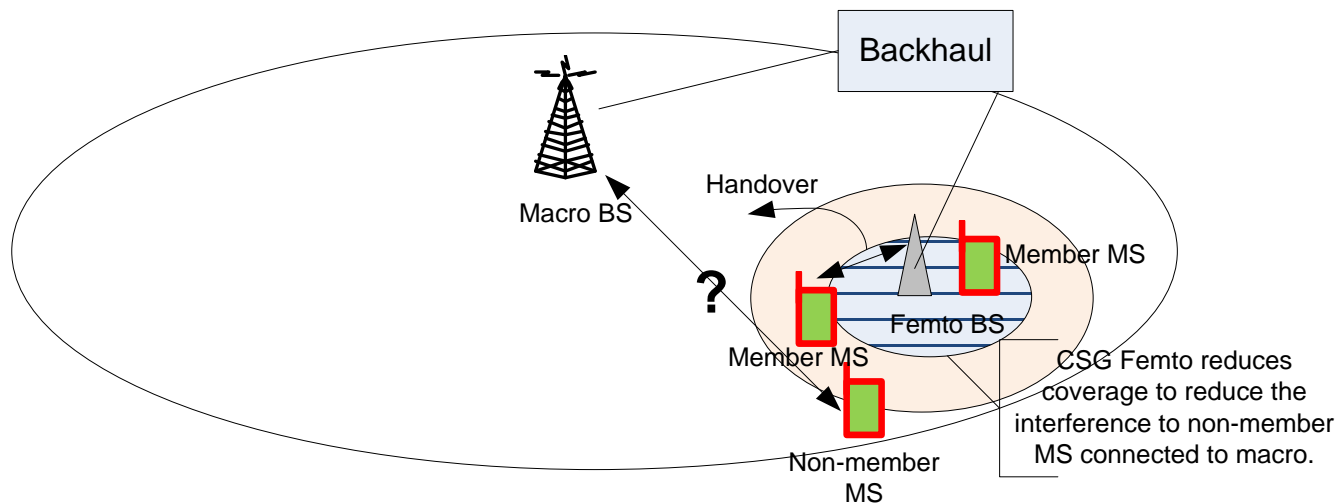
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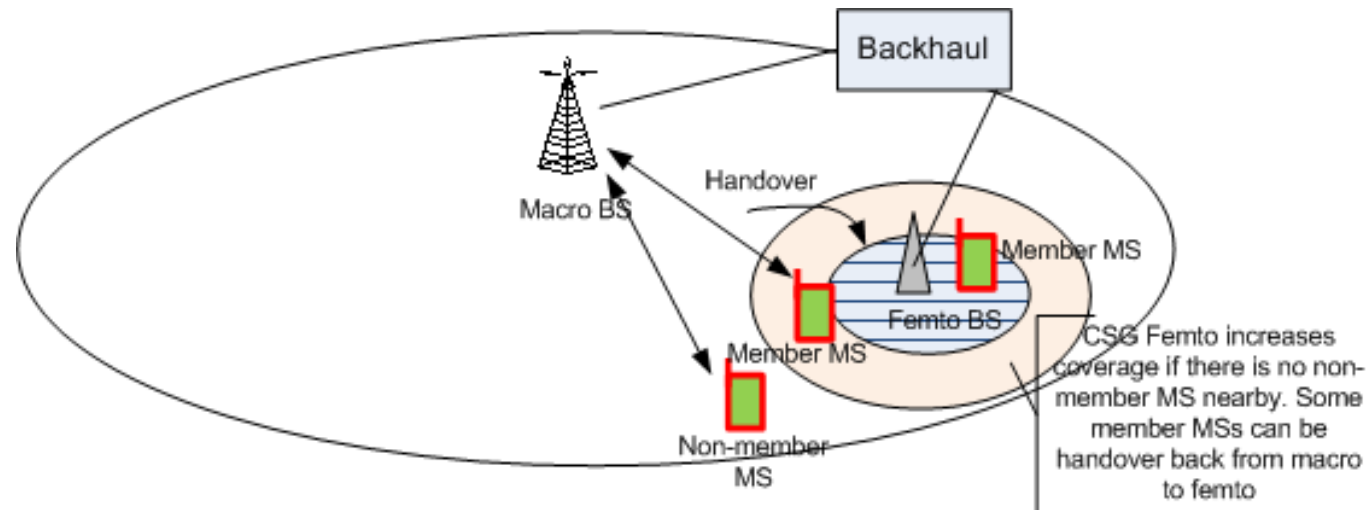
Coordinated IM: CSG femto interfere non-member MS

- CSG femto interfere non-member MS, but non-member MS could not hand over to CSG femto
- CSG femto reduces its coverage to reduce the interference to non-member MS
- CSG femto member MS QoS may be degraded because of the resource adjustment for the purpose IM. E.g., some member MS has to hand over to other BSs.
- IM should guarantee the QoS for both member and non-member MS.
- IM for non-member MS should coordinate with the possible consequential handover of member MS.



Coordinated IM-End: non-member MS getting far away from CSG femto

- CSG Femto increases coverage if there is no non-member MS nearby. Some member MSs can be handover back from macro to femto.
- Similar coordination as IM can be performed, to guarantee the QoS for member MS to handover back to femto, avoiding a sudden interference from femto before handover back to femto.



Proposed Solution

- In the case of Femto ABS resource adjustment due to IM, which may affect some ABS that are originally connected with the Femto ABS, the Femto ABS may send resource-adjustment information to the subordinated AMSs to prevent MSs from out of service.
- Before executing resource adjustment, the Femto ABS may request the subordinated AMSs to perform handover to neighbor cell if required. The Femto ABS should finish HO initiation and HO preparation phases before it does resource adjustment.
- The femto ABS may store static user information of its AMS who hands over to other ABS because of resource adjustment for interference mitigation. The user information may help MS, trying to call back to the Femto ABS, to perform optimized network reentry when the resource for interference mitigation is restored.