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Title	**FYI - BS Architecture Impact on Handoff Consideration**
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Re:	Recirculation Ballot #14b Announcement
Abstract	Current BS Architecture discussion is made over BS-BSC hierarchical relationship. In this contribution, another BS-BSC connection method is proposed, where a mobile client is assigned a BSC based on the MAC address. With this approach, many message exchanges are optimized or skipped.
Purpose	Discuss for handoff consideration
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FYI - BS Architecture Impact on Handoff Consideration

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1. Problem Statements

Current BS Architecture discussion is made based on the assumption that BS is connected to hierarchically higher BSC. Although this kind of connection is widely used, and simple to implement and easyw there is another approach where a MSS is assigned a BSC based on the MAC address.

2. Overview of Proposed Solution

BSs are interconnected with BSCs by *m* X *n* conncetion, where *m* is the number of BSs and *n* is the number of BSCs. This configuration maybe applied to specified management domain and don't need to be applied to nationwide or operator-wide.

When a MSS is authenticated by a BS, BS decides to which BSC that MSS is served based on the internal policy. MSS maybe assigned a BSC based on the MAC address prefix, suffix or MAC hash. It's like in cellular world Mobile Station is served by HLRs, where HLR is assigned and customer profile is provisioned a priori based on the Mobile Station's NPA[1]-NXX block.

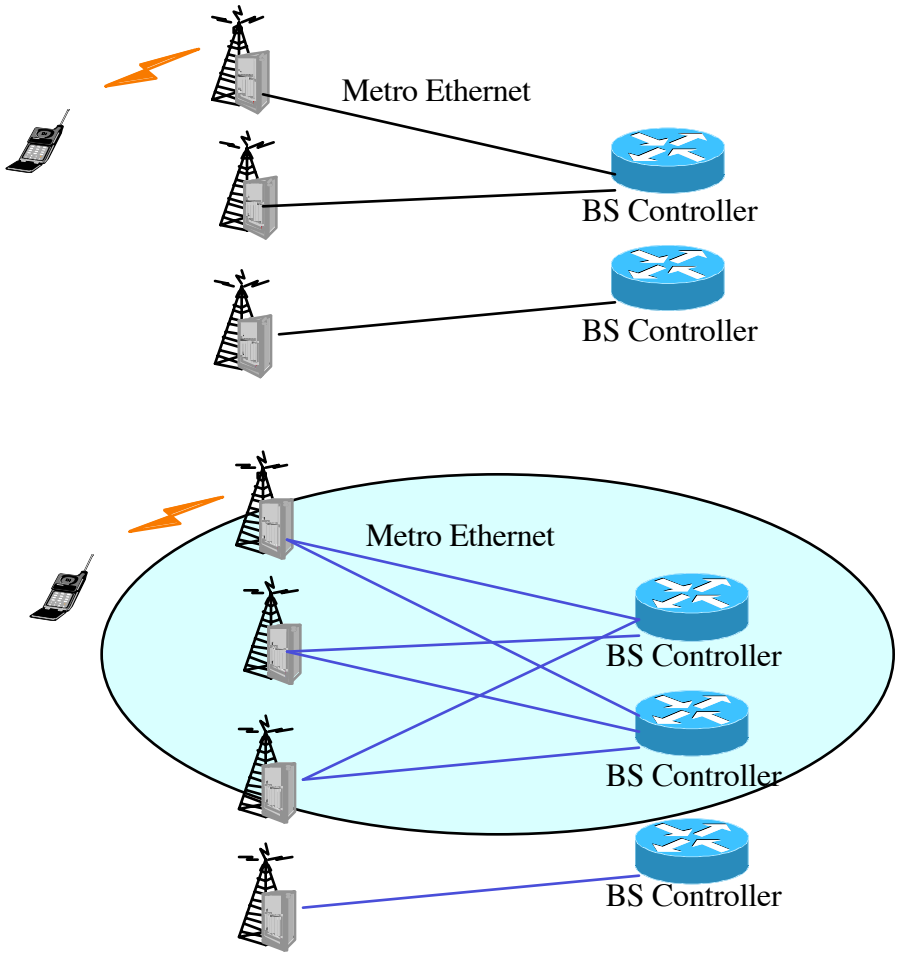

Figure 1 Current BS-BSC Connection Topology

[1] NPA – Numbering Plan Area, 3 most significant digits out of 10 digits is called NPA.

Figure 2 Proposed BS-BSC Connection Topology

Using this method, pseudo Mobile IP service is provided to MSS without using Home Agent, because if a MSS moves in this management domain, MSS uses the same IP address assigned by serving BSC. Additionally, wherever the MSS moves in this connectivity domain, MSS is always served by the same BSC. Therefore IP Address refresh and TFTP, NTP, Key Exchange etc could be skipped.

With this topology, there should be indication in the MAC message from the BS to MSS, which tells MSS to skip some specific exchange.

Indicator Bit	Meaning
IP Address Refresh maybe skipped	0 or 1
Authentication maybe skipped	0 or 1
TFTP maybe skipped	0 or 1
NTP maybe skipped	0 or 1
etc	

3. Conclusion

This contribution is FYI and gives insight that there exists various BS-BSC connectivity topology which leads to many messages may be skipped, there must be some mechanism, i.e. bit by bit indication, which has MAC message from the BS to the MSS indicating some specific exchange maybe skipped.