

Project	<b>IEEE 802.16 Broadband Wireless Access Working Group</b> < <a href="http://ieee802.org/16">http://ieee802.org/16</a> >	
Title	<b>Comments on Preferred Base Stations for Handoff</b>	
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Abstract	This contribution recommends the consideration of different levels preferences of neighboring bases sedations at the time of handoff.	
Purpose	To be discussed and considered in preparation of new text for handoff sections.	
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## Comments on Preferred Base Stations for Handoff

The idea of Hierarchical Cell Structure (HCS) has been used in several wireless access technologies, including GSM and UMTS systems. In fact, support of HCS is one of the IMT2000 requirements defined by ITU. This feature is highly desirable in building multi-layer networks, e.g. private or campus type or public networks. Using this feature improves the network capability to achieve better traffic routing/management, and to enhance the utilization of the network resources by the operators.

As part of support for HCS, the network needs to define different levels of preferences for hand over between base stations belonging to different layers. Therefore, we suggest that the system be given the capability of defining three different logical levels of preferred neighbors, namely “Preferred”, “Normal” and “Non-Preferred” with the following implications:

- Normal Neighbor: A mobile can handoff to this neighbor if the CINR of this BS is higher than that of its currently serving BS by a handoff hysteresis margin.
- Preferred Neighbor: A mobile may handoff to this neighbor as long as it receives sufficient CINR from the BS.
- Non-Preferred Neighbor: A mobile may handoff to this neighbor only when the CINR from its serving BS is not enough to continue the communication.