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RITTAVEE CHANTARAKUL : TRAFFIC QUANTITY BASED LOAD SHARING STRATEGIES FOR ADJACENT CELLS OF A MOBILE TELEPHONE SYSTEM. THESIS ADVISOR : WATIT BENJAPONLAKUL, D.Eng 101pp. ISBN 974-635-755-7

The objective of this thesis is to present channel allocation method of cellular mobile telephone system to reduce blocking rate and to increase capacity without changing hardware and air interface signaling system. This method can be used with the existing system. The applied model was based on GSM system with consideration of users mobility.

Traffic quantity based load sharing process can be separated into two processes, load sharing process and handover process based on traffic quantity.

The load sharing process uses handover process to share load from a heavier used channels cell to more vacant channels of adjacent cells. That call must be in handover margin area and must detect signal strength of the selected cell more than handover threshold, and the selected cell must has two vacant channels more than the current cell.
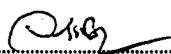
Handover process based on traffic quantity will delay handover of a call to an adjacent cell with traffic heavier than the current cell. Handover will be permitted if the target cell has two vacant channels more than the current cell. However, if the signal strength less than handover threshold will be allowed.

ภาควิชา	วิศวกรรมไฟฟ้า	ลายมือชื่อนิสิต
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