Basic Document for Consultation
'Changing Far-End Call Handover to Near-End Call Handover'

1.   Existing Call Handover Regime in Pakistan

The existing call handing over regime in Pakistan is based on the **far-end handover** principle whereby fixed as well as mobile networks receive calls from other networks at the farthest PoIs in the region for which the calls are destined or in some cases (Mobile-to-Mobile and Fixed-to-Mobile) at far-end MSCs that serves the area where the destined mobile number belongs to. This call handover scenario is primarily based on the reason that mobile as well as fixed-line networks have been allocated subscriber numbers based on Geographical Numbering Scheme.

Mobile Termination Rates under Far-End Handover:

The Mobile Termination Rate is based on the costs incurred to terminate a call at the far-end PoI that is closest to the area where the called mobile number belongs to (e.g. a call from Islamabad to Karachi on a mobile network is brought up to Karachi by the originating network on its own cost). In case the called mobile subscriber is not in the destined area then the additional costs for domestic roaming are being absorbed by the terminating mobile operator, which may or may not charge the subscriber for such additional costs.

2.   Proposed Call Handover Regime (Near-end Hand Over):

Under the proposed regime of near-end call handover, the calls terminating on the mobile networks are to be handed over at the nearest PoI to the originating network (e.g. an operator in Islamabad would handover the call to the mobile operator's PoI in Islamabad irrespective of the fact whether the called number exists in Islamabad or not). Under near-end handover regime for fixed-to-mobile calls, the mobile numbering scheme becomes practically Non-Geographic and thus a dialer to mobile network may not identify the geographical destination of the called mobile number.

Mobile Termination Rates under Near End Handover:

The Mobile Termination Rate that the mobile operators receive from other fixed-line and mobile operators in a near-end handover is based on the costs incurred to terminate a call from the PoI that is closest to the area from where the call is being originated. For example, a fixed-to-mobile call originating in Islamabad would be handed over to the PoI

in Islamabad but the total termination cost would include the cost of terminating the call in Islamabad (assuming the dialed mobile number is actually in Islamabad) and would also include *the additional carrying cost based on the probability* that this number may not actually be in Islamabad. Resultantly, the MTR would include the cost of carrying as well as terminating the call to the called region, which may or may not be the same as that of calling region.

Mobile-to-Fixed Calls:

Since fixed-line local loop networks are licensed on geographical basis, therefore, the call handover regime for mobile to fixed networks may not change and mobile networks would be obliged to handover the calls to fixed networks at the far-end call handover principle. This would also ensure that mobile operators roll-out their networks in order to take the fixed-to-mobile calls from the Local Loop operators at PoI located in the originating region and handed over mobile-to-fixed calls to Local Loop operators at the PoI in the destined region. *However, the call handover for Mobile to Fixed calls can also be considered on Near End Handover, if it is practically possible.*

3.   Options for Consideration:

Following are few options that may be considered by the industry on the call handover approach to be used for different call scenarios:

Call Types	Option 1	Option 2	Option 3
Fixed-to-Fixed Calls	Far-end	Near-end	Near-end
Fixed-to-Mobile Calls	Far-end	Near-end	Near-end
Mobile-to-Mobile Calls	Far-end	Near-end	Far-end
Mobile-to-Fixed Calls	Far-end	Near-end	Far-end