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Ec/Io versus RSCP/ISCP

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NOKIA

Ec/Io versus RSCP/ISCP

- Ec = RSCP= $RSCP_1+RSCP_2+\ldots+RSCP_N$, where N is number of multipath components. RSCP has to be estimated separately for each multipath component
- Io = RSSI= wideband interference power
- ISCP = $ISCP_1+ISCP_2+\ldots+ISCP_N$, where N is number of multipath components. ISCP has to be estimated separately for each multipath component

- SNRs of Ec and RSCP estimates are the same since the same measurement quantity
- SNR of Io estimate is significantly better than the SNR of ISCP estimate
  - $\rightarrow$Accuracy of Io does not degrade the accuracy of the measured Ec/Io
  - $\rightarrow$Accuracy of ISCP degrades the accuracy of the measured RSCP/ISCP
- **Accuracy of RSCP/ISCP estimate is significantly worse than the accuracy of Ec/Io estimate**

Accuracy comparison between Ec/Io versus RSCP/ISCP cont.

- In order to improve the accuracy of RSCP/ISCP to be the same as for Ec/Io **longer averaging is required**
- This may cause **delay to handover decision** since several neighbours have to be measured during the handover preparation measurements
- Or several neighbours have to be measured simultaneously

  →**Complexity increases significantly in the UE** especially when keeping in mind that ISCP has to be estimated separately for each multipath component.