

Motivation for new work item proposal on Network-Assisted Interference Cancellation and Suppression for UMTS

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Background and Motivation

- SI on Network-Assisted Interference Cancellation (NAICS) for UMTS is proposed to be completed at RAN#69 (TR 25.766)
- The study identified that IC UE outperforms non-IC UE greatly at cell edge
- The “Study on NAICS for UMTS” concluded that NAICS can offer benefits to the network in the form of enabling offloading of IC-capable users to a candidate cell
 - With the knowledge of CQI reflecting link level performance, enhanced offloading mechanism allows the network to better distribute its capacity when cell congestion is a problem, offering gains in capacity and/or UE performance

Proposed WI Objectives

- Specify mechanisms for enhanced offloading with NAICS UE based on the multiflow capability of a UE, with the following considerations (RAN1, RAN2, RAN3)
 - Single carrier scenario when the network supports multiflow or when the network does not support multiflow
 - Multicarrier scenario when the network supports multiflow or when the network does not support multiflow
 - Potential enhancements at the UE side to reduce uplink interference, as well as UE power savings
- Specify mechanisms to enhance IC UE performance via signalling (RAN1, RAN2)
 - Type of interferer information to be considered: modulation type, MIMO parameters, UE ID
- Impact on UE and network implementations shall be minimized