

**Source:** Intel Corporation

**Title:** Proposed SI: Mitigating the Effect of CPICH Interference at the UE

**Document for:** Approval

**Agenda Item:** 6.11

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**Study Item Description**

**Title:**

Mitigating the Effect of CPICH Interference at the UE

**1 3GPP Work Area**

X	Radio Access
	Core Network
	Services

**2 Linked work items**

*None*

**3 Justification**

Because the CPICH is typically allocated a significant portion of the total Node-B transmit power, the interference impact of the CPICH is particularly strong. On the other hand, the information content and structure of the CPICH channels are completely known a priori at the receiver, which can considerably simplify efforts to mitigate the CPICH interference effect. Initial studies suggest that mitigating the effect of CPICH interference at the UE can significantly improve UE performance requirements and increase radio network capacity, at a relatively small price in additional complexity.

**4 Objective**

The initial objectives are the verification of the benefits of this feature through additional simulation studies, and further evaluation of complexity issues. Depending on the results of this initial phase, the work may then proceed to the establishment of appropriate test scenarios and procedures, as well as the derivation of improved UE performance requirements through physical layer simulations.

**5 Service Aspects**

*None*

**6 MMI-Aspects**

*None*

**7 Charging Aspects**

*None*

**8 Security Aspects**

None

**9 Impacts**

<b>Affects:</b>	<b>USIM</b>	<b>ME</b>	<b>AN</b>	<b>CN</b>	<b>Others</b>
<b>Yes</b>		X			
<b>No</b>	X		X	X	
<b>Don't know</b>					

**10 Expected Output and Time scale (to be updated at each plenary)**

<b>New specifications</b>						
Spec No.	Title	Prime rsp. WG	2ndary rsp. WG(s)	Presented for information at plenary#	Approved at plenary#	Comments
<b>Affected existing specifications</b>						
Spec No.	CR	Subject		Approved at plenary#	Comments	
25.101		UE Radio transmission and reception (FDD)		RAN #13		
34.121		Terminal Conformance Specification, Radio Transmission and Reception		RAN #13		

**11 Work item raporteurs**

Shimon Moshavi, Intel (Shimon.Moshavi@intel.com)

**12 Work item leadership**

TSG-RAN WG4

**13 Supporting Companies**

Cingular, T-Mobil, Telecom Italia, AWS, Omnitel/Vodafone, Lucent, Intel

**14 Classification of the WI (if known)**

X	Feature (go to 14a)
	Building Block (go to 14b)
	Work Task (go to 14c)

14a The WI is a Feature: List of building blocks under this feature (list of Work Items identified as building blocks)

14b The WI is a Building Block: parent Feature (one Work Item identified as a feature)

14c The WI is a Work Task: parent Building Block (one Work Item identified as a building block)