

### Work Item Description

**Title: HS-DPCCH ACK/NACK Enhancement**

**1 3GPP Work Area**

<b>X</b>	Radio Access
	Core Network
	Services

**2 Linked work items**

*None*

**3 Justification**

The Technical Report on “HSDPA Enhancements” under the Radio Link Performance Enhancements Study Item has shown that enhancements to the HS-DPCCH ACK/NACK transmission can reduce the UE peak power when using HSDPA in UTRA FDD, which can result in improved coverage for DCH or E-DCH.

The transmission of a layer 1 preamble and postamble can improve ACK/NACK decoding reliability, enabling the current performance to be achieved with a lower HS-DPCCH transmit power.

Further resulting benefits include improving cell coverage for HSDPA.

**4 Objective**

The objective of this work item is to introduce layer 1 improvements to the transmission of ACK/NACK on the UTRA FDD HS-DPCCH, together with associated higher-layer signalling to activate the improvements, with the aim of improving coverage for uplink DCH or E-DCH.

**5 Service Aspects**

*None*

**6 MMI-Aspects**

*None*

**7 Charging Aspects**

None

## 8 Security Aspects

None

## 9 Impacts

Affects :	USIM	ME	AN	CN	Others
Yes		X	X		
No	X			X	X
Don't know					

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

New specifications						
Spec No.	Title	Prime rsp. WG	2ndary rsp. WG(s)	Presented for endorsement at plenary#	Approved at plenary#	Comments
Affected existing specifications						
Spec No.	CR	Subject			Approved at plenary#	Comments
25.212		Multiplexing and channel coding (FDD)			RAN#26	
25.214		Physical layer procedures (FDD)			RAN#26	
25.331		Radio Resource Control (RRC); Protocol Specification			RAN#26	
25.433		UTRAN Iub interface NBAP signalling			RAN#26	

## 11 Work item rapporteurs

Jussi Kähtävä (Nokia)

## 12 Work item leadership

TSG-RAN WG1

## 13 Supporting Companies

Nokia, Philips, Mitsubishi, Siemens, T-Mobile, TeliaSonera, 3, Orange

## 14 Classification of the WI (if known)

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

14a The WI is a Feature: List of building blocks under this feature

14b The WI is a Building Block: parent Feature

RAB support enhancements  
(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)