

**3GPP TSG RAN Plenary #24**  
**Seoul, South Korea, 2<sup>nd</sup> – 4<sup>th</sup> June 2004**

**Tdoc RP-040239**

**Agenda Item:** 8.13  
**Source:** Nokia, Philips, Mitsubishi, Siemens  
**Title:** Proposed Work Item for HS-DPCCH ACK/NACK Enhancement  
**Document for:** Approval

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A proposed Work Item Description for HS-DPCCH ACK/NACK Enhancement is presented below, following from the Study Item TR on “HSDPA Enhancements” (TR25.899).

## 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 improve the performance of HSDPA in UTRA FDD.

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. This would also lead to reduced uplink interference.

Further resulting benefits would 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 reducing uplink transmit power and interference, and enhancing HSDPA performance.

### **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						
25.214						
25.331						
25.433						

## 11 Work item rapporteurs

Jussi Kähtävä (Nokia)

## 12 Work item leadership

TSG-RAN WG1

## 13 Supporting Companies

Nokia, Philips, Mitsubishi, Siemens

## 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)