

**Study Item Description**

**Title** Low output power FDD Base Station

**1 3GPP Work Area**

X	Radio Access
	Core Network
	Services

**2 Linked work items**

*none*

**3 Justification**

Many companies have shown interest in the feasibility of a low output power FDD Base Station and the possibilities it offers, e.g.:

1. the flexibility in radio network deployment, which should be one of the characteristics of a 3G system,
2. it is not necessary to attenuate a high power signal before feeding an active external distribution system (lower power consumption, positive environmental effects),
3. it facilitates the sharing of the infrastructure among operators, especially in locations where it is difficult to find sites, or where operators are forced by regulators to share the infrastructures,
4. it allows the placement of one or several base stations in a centralised position with separate RF power amplifiers distributed closer to the subscriber positions, thus reducing interference while meeting the unwanted emissions requirements.
5. by placing the base stations at one location, less supporting infrastructure is required and maintenance is simplified.

**4 Objective**

The study item shall identify the application scenarios and the relevant parameters that best characterise this low output power FDD Base Station, for instance the range of output powers to be considered (eg. -15 to 10 dBm). It shall identify the changes needed in the specifications to permit this low output power FDD Base Station, taking into account the document RP-030194, and other contributions.

Submission of initial results is planned for RAN4 #27 and RAN3#36  
The conclusion of the study item is planned for RAN #21.

**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		O&M, RRM
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 resp. WG	2ndary rsp. WG(s)	Presented for information at plenary#	Approved at plenary#	Comments
TR xx.yyy.	Low output power Base Station	WG4	WG3	RAN#20	RAN#21	
Affected existing specifications						
Spec No.	CR	Subject	Approved at plenary#		Comments	

**11 Work item rapporteurs**

José Alberto Martín & Ana Burgos (Telefónica)

**12 Work item leadership**

TSG-RAN WG4

**13 Supporting Companies**

Tekmar Sistemi  
Telefonica  
TDF  
Mikom  
Marconi

**14 Classification of the SI**

	Building Block (go to 14b)
--	----------------------------

**14b The SI is a Building Block: parent Feature is Radio Interface Improvement Feature**

