
Doc For	PCG	TSG SA	TSG CN	TSG RAN	TSG T
Decision			X		
Discussion			X		
Information					X

Source: Fujitsu, Nokia, BT, NTT DoCoMo, NEC

Subject: Multicall WI description

The document contains a proposed Work Item Description for Multicall in UMTS. This work Item was tentatively agreed during the ad-hoc meeting in Heathrow (18-19 February 99) pending the formal agreement of TSG-N.

A.1 WI description

x **Multicall**

x.1 **TSG Project**

X	Terminal
	Radio
X	Core Network
	System

x.2 **Linked Work Items**

The impact of the End to End UMTS QoS Management work item should be considered.

x.3 **Justification**

Multicall, i.e. the capability of a terminal to have several parallel independent calls/transactions, is one of the important novelties of UMTS. It can be anticipated that for the end user it will be one of the most visible enhancements from 2G to 3G.

x.4 **Service Aspects**

Multi call is the feature that provides multiple active connections simultaneously in a mobile terminal. Multi call needs multiple bearers (Channels) used by several CM-layer connections. The CM-layer connections may use circuit switched or packet switched bearers.

The user should be able to select the initiating service whether as “Multi call” or as “Shared bearer” at the call origination or the call termination. If the multiple bearers are to be established in one mobile terminal, the user should be able to select one bearer for shared bearer services.

It should be possible for the number of active connections supported simultaneously to be restricted and selected by network operator. The number of active connections may be limited also by the capabilities of the used terminal or the available radio resources. It shall be possible to have one or more circuit switched connections simultaneously with one or more parallel packet connections.

The work item should consider of following aspects:

1. Control of the use of several radio bearers for CM-layer connections. Generic mechanisms for allocating multiple bearers for both circuit and/or packet connections.
2. Linkage mechanism for associating several bearer with the corresponding CM-layer entities.
3. The use of multiple bearers to maintain QoS of the allocated bearer (e.g for speech) in the presence on significant parallel signalling from the CM-layer connections (e.g. for transferring User to User Signalling, USSD, etc)
4. Interactions with all impacted Supplementary Services (e.g. CW, CH, MPTY, CCBS, CFB etc)

Due to problems foreseen in the interaction of multicall and existing services, the multicall feature could be introduced in a phased manner, meaning that in the first phase, i.e. Release 99, certain limitations are likely to be necessary.

There could be a need to limit the number of parallel circuit switched speech calls to one to avoid potential interactions with supplementary services e.g detection of the user busy condition for supplementary services i.e. CH, CW and MPTY. The need for this limitation needs to be studied further.

x.5 MMI Aspects

There may be some impact to the MMI associated with the supplementary services.

x.6 Charging Aspects

FFS

x.7 Security Aspects

None

x.8 Impacts

Affects:	Terminal	Radio	CN	Others
Yes	X	X	x	
No				X
Don't know				

x.9 Expected Output and Time scales

Approval of WI: TSG-CN#2 (March 99)

Start of Report TSG # ()

Scope and first draft TSG # ()

Approval of deliverable by TSG TSG # ()

x.10 Work Item rapporteurs

Mr Yahagi (NEC)

x.11 Supporting Companies

NTT DoCoMo, Fujitsu, NEC, T-Modus, Nokia, BT

x.12 Responsible STC(s)

Primary Responsibility TSG CN WG1

Secondary Responsibility TSG CN WG2

x.13 Others