

TSG-SA Working Group 1 (Services) meeting #2
Edinburgh, Scotland 9th-12th March 1999

TSGS1#2(99)192

From: TSG-SA WG1
To: TSG-CN WG1, TSG-CN WG2 and TSG-SA WG3
CC: TSG-SA WG2

LS on development of the Multicall capability in UMTS

TSG-SA WG1 have discussed and adopted the proposed Work Item for the Multicall capability for UMTS. Attached is a copy of the agreed WI description sheet (TSGS#2(99)189).

Based on the recommendation from the TSG-N, TSG-SA WG1 will be the prime responsibility for the creation of stage 1 document. In order to meet the required tight schedule (early May), an ad-hoc meeting will be held exclusively for the creation of the Multicall stage 1 document (29-30 March in Heathrow-UK). The output of the ad-hoc will be tentatively sent to TSG-SA for information.

Also, TSG-SA WG1 would like to invite TSG-SA WG3 to investigate the implication on the security aspect of the Multicall capability in UMTS. Any input would be highly welcomed to the ad-hoc meeting.

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Work Item Description

Title

Multicall

Intended Output

Technical specification(s).

Impact on Other Technical Specifications and Technical Reports

Several existing core protocol specifications need to be modified based on output of this work item.

Technical Scope

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.

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 multical and existing services, the multical 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.

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

Security and Charging aspects need to be studied with the co-ordination of relevant groups.

Impact on Other 3GPP Work Items

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

Schedule of Tasks to be Performed.

Task	Planned Start	Planned Finish
Work Item Creation	8/3/99	12/3/99
Work item Approval by TSG SA	27/4/99	27/4/99
Version 1.0.0 of Stage 1	15/3/99	10/4/99
Further tasks TBD		
Relevant TSs approved	30/12/99*	30/12/99

Note: * These dates are a guess at present

Supporting Individual Members

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

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