

**Source:** S1

**Title:** Work Items:

1. WI on UMTS Interworking with IS-41 networks

2. WI on Multicall

**Document for:** Approval

**Agenda Item:** 5.1

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Two Work Items on

1. UMTS Interworking with IS-41 and

2. Multicall

are presented for Approval.

## **Work Item Description**

### **Title**

UMTS Interworking with IS-41 networks

### **Intended Output**

Technical report that is a feasibility study.

### **Impact on Other Technical Specifications and Technical Reports**

Based on output of this feasibility study a work item may be created.

### **Technical Scope**

In Korea, there are only IS-41 Networks. In this environment, the interworking function with IS-41 networks is necessary in order to introduce the 3GPP system in Korea. In order to lead IMT-2000 systems, the general requirements for 3GPP service and system aspects must support functions and structures for interworking with another networks. Accordingly, 3GPP core network must support the interworking function with 3G IS-41 network.

The requirements for the roaming, the hand-over, and the interoperability of VHE in 3G networks will be described in this document on service requirements with the following priorities:

- Global Roaming (mandatory)
- Hand-over (optional)
- VHE Interoperability (optional)
- And so on(For Further Study)

The study should include set of telecommunication services to be supported and relevant security issues. The study should include evaluation of NNI concept currently being elaborated by ITU.

### **Impact on Other 3GPP Work Items**

This report provides the guidelines for other TSGs and WGs for the definition of Architecture and Networks.

### **Schedule of Tasks to be Performed.**

<b>Task</b>	<b>Planned Start</b>	<b>Planned Finish</b>
Work Item Creation	15/2/99	23/2/99
Revised Work item Approval by TSG SA	26/4/99	27/4/99
Drafting and discussion	1/4/99	1/12/99
Submission to TSG SA for approval	1/12/99	30/12/99

**Note:** \* These dates are a guess at present

### **Supporting Individual Members**

All WG1 members

### **Rapporteur**

SAMSUNG Electronics

## **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 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.

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.**

<b>Task</b>	<b>Planned Start</b>	<b>Planned Finish</b>
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**

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## **Rapporteur**

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