

**Agenda Item:** 6.6

**Source:** TSG SA WG1 subgroup 4.2.99

**Title:** **Comments on TTC requirements**

**Document for:** Information

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The following is a record of the notes made by a subgroup considering the alignment of this document (originally presented as tdoc 63) with ETSI UMTS service requirement documents. Notes are shown as revision marks.

## General Requirements

- b Global roaming (there is a requirement for roaming to PDC and other 2<sup>nd</sup> generation systems but this is not to be studied in 3GPP). Already in 22.00.
- b Multimedia. Already stated in section 4 of 22.00.
- b Service portability. Ability of users to have transparent access to a set of their subscribed services when roaming. This is a key feature of VHE, and is covered in 22.00.
- . Diversification and quick provision of services
  - b Services newly created by an operator should be provided to the user quickly (ie rollout of newly developed services should be fast and efficient):-  
This is a general requirement that is agreed in principle but need to check whether in 22.01(?). If not TTC provides appropriate text.
- b Network efficiency.
  - b Transport techniques, which can utilise bandwidth efficiently. See tdoc 69 presented to WG1#1.
  - Resource optimisation at the radio access network.. Covered by section 6 of 22.00.
- b Interworking with ISDN/PSTN (ie NISDN, not BISDN). Covered in 22.00 section 8.14.
- b Negotiation/Modification of bearer
  - b It is required to support the capability to negotiate the bearer capabilities between user and user or between user and networks. (covered in 22.00, details in 22.05)
  - b It is required to support to modify the bearer capabilities. ( covered in 22.00 details in 22.05)
- b Support of asymmetric communication. It is required to support asymmetric communication in both directions between MT and network for circuit switched mode and packet mode. (covered in 22.00, details in 22.05).
- Emergency Call
  - It should be possible to connect emergency call to the appropriate destination (i.e. police station or fire brigade, using two different numbers). (need for emergency call covered in 22.00, need for two different numbers are not. Requires text from TTC.)
  - Note: emergency calls are possible without USIM).
  - The dial number is different for each call in Japan (i.e. \*110\* for police and \*119\* for fire brigade). It is required to support the capability to identify of emergency call

for police or fire brigade in call/connection control. (not covered, requires input from TTC)

·b Mobility control requirements

·b Ensure optimisation of internetwork signalling. Not covered, requires text from TTC.

·b Security enhancements - covered in 22.00.

·b Variable length of security parameters- inputs required to TSG SA - WG4 (security).

·b Secure detach - requires input.

·b Mutual authentication - covered in 22.00.

·b Multicall

• Multiple simultaneous calls. Circuit switched call and packet session can be held in a MT simultaneously and independently. In addition, multiple CS calls and multiple packet sessions can also be held in a MT. 22.00 allows multiple calls that are treated as independent calls by the network.

• The number of simultaneous call offered to the user shall be limited by subscription. This should be implemented by appropriate mechanisms, text to be added to 22.00 and 22.01, TTC to supply.

• With the multicall service, CW, CALL HOLD and MPTY services can be offered simultaneously (This requirement to be clarified by TTC, ie service scenario to be provided);

**APPENDIX (Note, this appendix is informational)**

Relation with Supplementary Service

With the multicall service, CW, CALL HOLD and MPTY services can be offered simultaneously.

CW (fig 1.1) and CALL HOLD (fig 1.2) shall be offered by using bearers. Both of the services result in the same state; there are two calls related to one bearer and another call, and one of first two calls is active and another is held. MPTY (Fig.1.3) shall be offered from a state whose one call is active and another call is held.

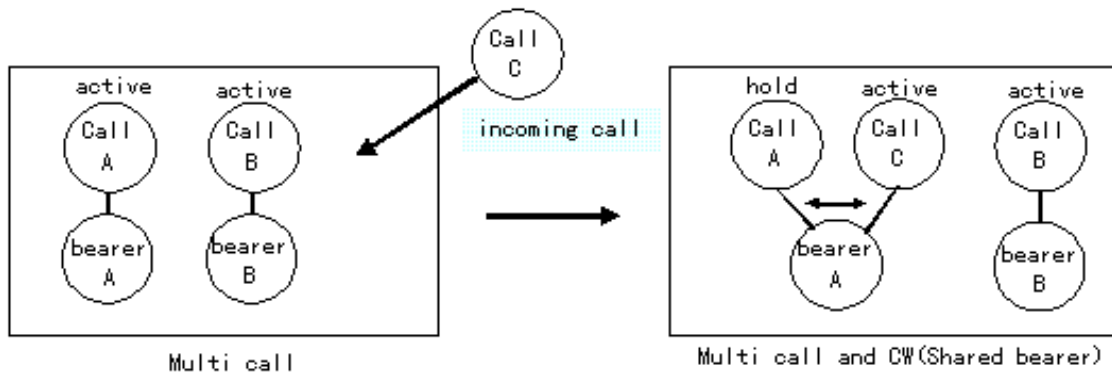


Fig 1.1 Call Waiting

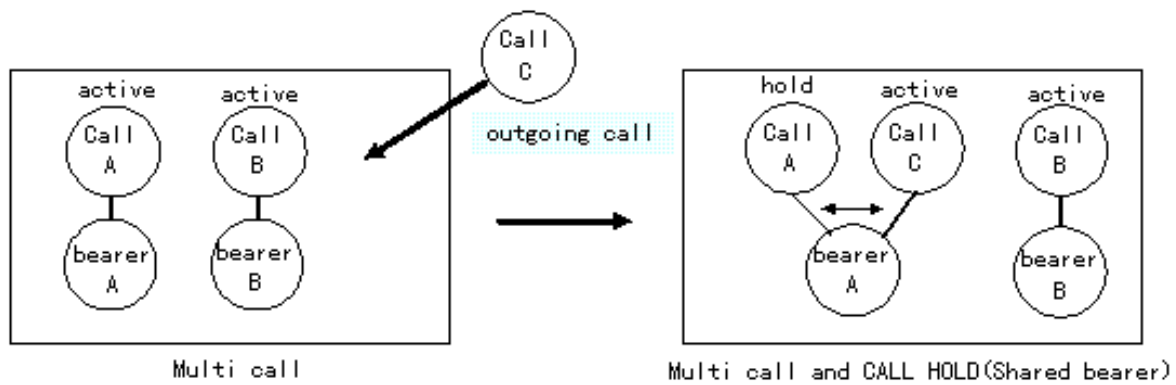


Fig 1.2 Call Hold

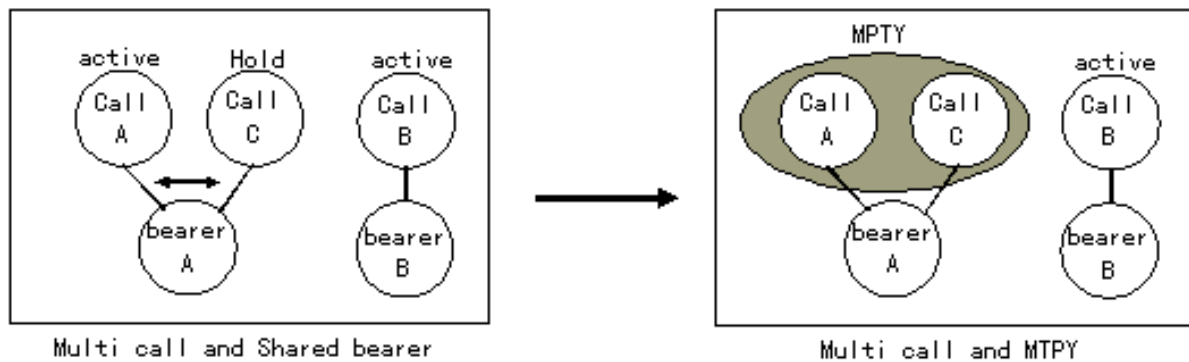


Fig 1.3 Multi Party

When an additional incoming or outgoing call is initiated, the user can select to form a multicall (multiple bearers) or a shared bearer. If there are multiple bearers, the user can select which bearer to be formed a shared bearer.

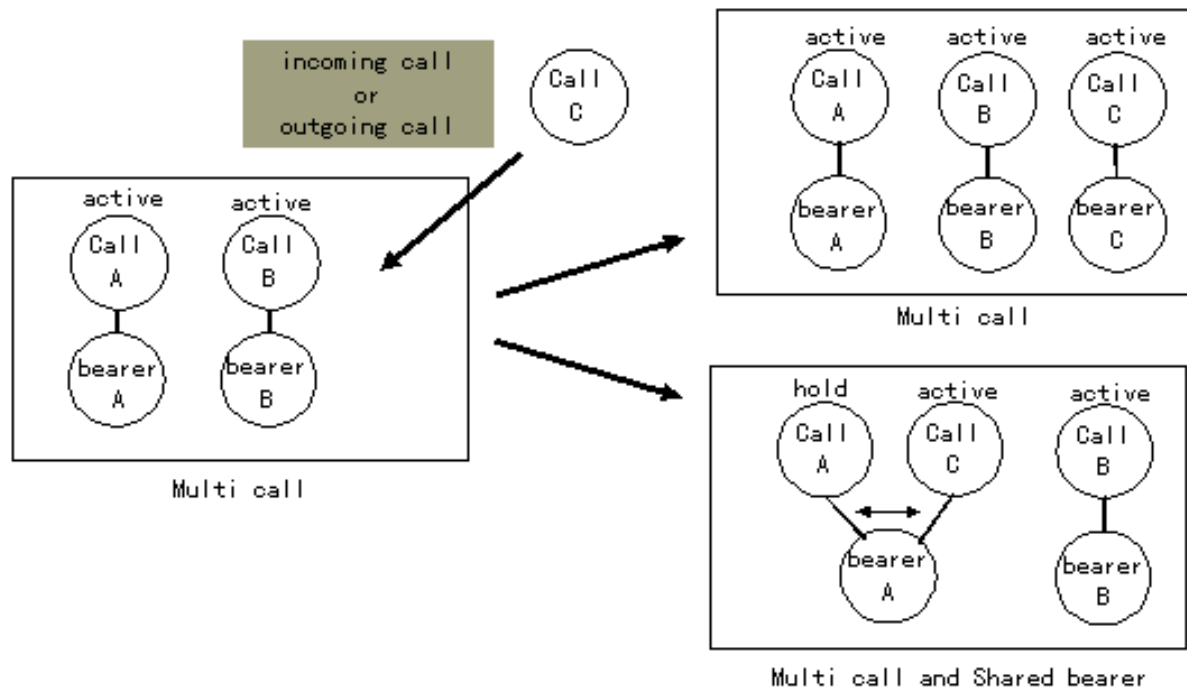


Fig 1.4 Selection of Multicall or Shared Bearer

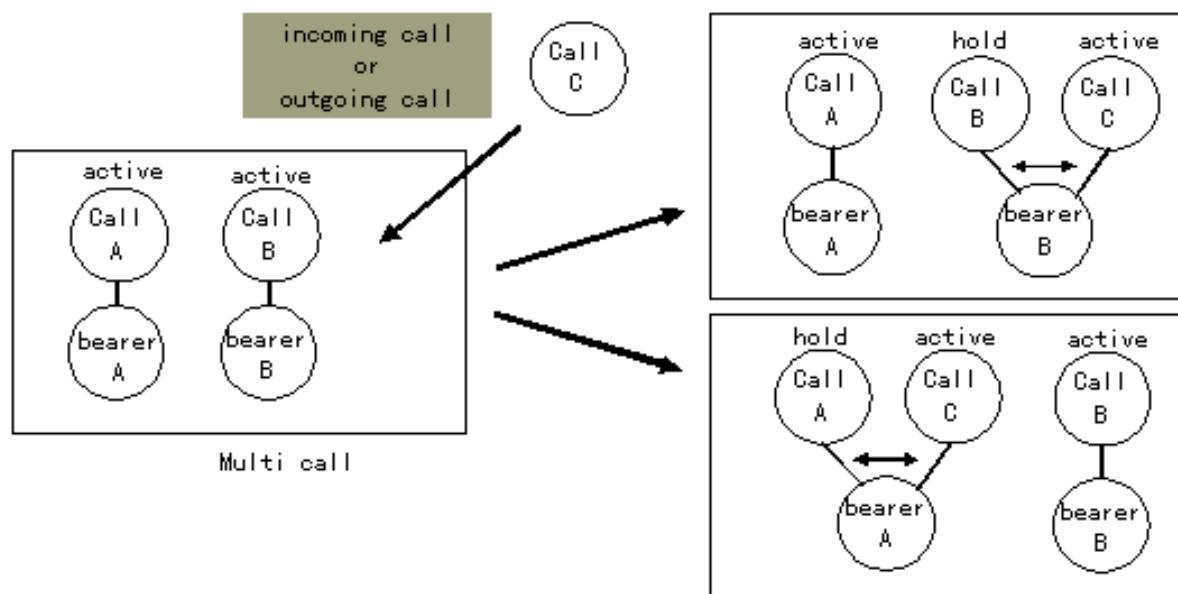


Fig 1.5 Selection of Shared Bearer

~~Fig 1.1 Call Waiting~~

~~Fig 1.2 Call Hold~~

~~Fig 1.3 Multi Party~~

**Proposal: Include main texts in main section of 3GPP SA phase 1 requirement (UMTS 22.00 equivalent)**  
**Include appendix above -in appendix of 3GPP SA phase 1 requirement.**

## **Core Network Requirements**

- b ·bFind and bill the correct user, network and VASP for provided services and associated signaling. Fundamental David Verrier will check that it is included in 22.15.
- b ·bInterpret the addressing(covered in 'Advanced Addressing, 22.75'), the QoS negotiation and the service logic of services demanded (covered by 22.05 section on QoS negotiation).
- b ·bKeep accurate account for services delivered (Billing 22.15).
- b ·bRoute incoming calls, service request and signals to the correct receiver (Fundamental. To be added to 22.01 if not there, David Verrier to confirm).
- b ·bInterpret the MMI received from the user/subscriber's terminal into session control information or service provider dialogues (covered in VHE requirements, 22.21).
- b ·bMaintain distributed subscriber and user data consistent with data held in the Home Environment. (Fundamental. Check it is in 22.00).
- b ·bInterwork with other networks (see above).
- b Locate the user and route incoming sessions to the user (Fundamental, check in 22.01).
- b ·bAuthenticate the users and Home Environment in the network and allow access to services (Authentication covered in 22.00 section 10.).
- b ·bAdd or cancel service subscription. Fundamental. David Verrier check in 22.05.
- b ·bCease subscription to a service when the subscriber departs. ie leaves network. Fundamental. David Verrier check in 22.05.
- b ·bModify the user/subscriber profile. Fundamental. David Verrier check in 22.05.
- b Account for user traffic and signaling traffic. TTC to provide clarification whether 'account' applies to billing or traffic monitoring and measurement.
- b Distribute user interface logic and service logic for new services (see above).
- Negotiate bearer/service capabilities and their attributes such as throughput and QoS level of the service capabilities will be negotiated between the network and the user based on what is necessary for the service and what capabilities are available in the network. (see above).

- b Internetworking Requirements
- b ·b NNI between UMTS and other IMT-2000 networks should have the capabilities to provide information for user charging and interconnection charge billing between serving network and supporting/home network; Covered in 22.15.
- b ·b NNI should have the management capabilities to provide protection of the home network from overload ie Admission control capability. Covered in 22.00, 22.05.
- b ·b NNI should have the security capabilities such as authentication and screening. Fundamental requirement: David Verrier to check in 22.01.

**Proposal:**

**To be included in Core Requirement sections in 3GPP SA phase 1 document (equivalent to UMTS 22.00).**