**Source:**        **Nortel Networks**
**Title:**          **WID on Feasibility Study on "IMS services using CS bearers" Building Block (revision of SP-04044)**
**Agenda Item:**

## Work Item Description

~~Title: Combining CS bearers with IMS~~
**Title:   Feasibility Study on IMS services using CS bearers**

## 1        3GPP Work Area

|   | Radio Access |
|---|---|
| X | Core Network |
| ~~X~~ | Services |

## 2        Linked work items

*none identified*

## 3        Justification

Many operators regard IMS as a key feature. However, there remain issues with the efficiency of transferring Voice over IP over the radio interface, and, with the capability of the GSM radio interface to handle VoIP.  Additionally, operators are interested in techniques to smooth the rollout and accelerate the take-up of IMS.

As a result of this, some companies have discussed using the existing CS infrastructure to transport the voice traffic; the PS domain to carry IMS signaling and 'non real time' user data; the IMS infrastructure to provide 'advanced services'; and "something" to combine them all together. These discussions have tended to show that there are many different techniques for combining the CS and IMS parts together. However, leaving mobile vendors, infrastructure vendors and operators to develop these different techniques in isolation is likely to lead to interoperability problems and fragmented, small markets.

Hence it is proposed to study the techniques for ~~combining~~delivering IMS services using CS ~~real time~~ bearers ~~with IMS~~for real-time media components. ~~and to specify a single solution~~.

## 4        Objective

The ~~primary~~ objective is to ~~standardise one~~study method~~s~~ for ~~combining the~~using CS real time bearers with~~in~~ IMS sessions to better satisfy the existing requirements in TS 22.228, including the interoperability between the possible solutions. ~~The first step towards~~The work will consider ~~this is to conduct a feasibility study on~~ the architectural requirements; architectural solutions; and their tradeoffs.

Subsequent steps (eg the production of a TS; stage 3 CRs; and any work in IETF) should be identified during the concluding phases of the feasibility study.

The feasibility study shall cover the different solutions for offering existing IMS simultaneous services (real time media + non real -time media) especially in GERAN, where conversation PS spectrum efficiency is too low.

## 5 Service Aspects

None identified. The intention is to meet existing IMS stage 1 requirements but with improved radio efficiency and/or utilisation of the existing GSM RAN.

## 6 MMI-Aspects

No specification is expected.

## 7 Charging Aspects

Inter-operator accounting and roaming charging aspects need to be considered for the CS bearer and its relationship with any IMS session.

## 8 Security Aspects

*None anticipated.*

## 9 Impacts

| Affects: | UICC apps | ME | AN | CN | Others |
|----------|-----------|-----|-----|-----|--------|
| **Yes** | | X | | X | |
| **No** | | | | | X |
| **Don't know** | X | | X | | |

## 10 Expected Output and Time scale (to be updated at each plenary)

| New specifications | | | | | | |
|---|---|---|---|---|---|---|
| Spec No. | Title | Prime rsp. WG | 2ndary rsp. WG(s) | Presented for information at plenary# | Approved at plenary# | Comments |
| TR 23.8bc899 | Report on Alternative Architectures for Combining CS Bearers with IMS | SA 2 | | #25 | #26 | |
| | | | | | | |

| Affected existing specifications | | | | |
|---|---|---|---|---|
| Spec No. | CR | Subject | Approved at plenary# | Comments |
| | | | | |
| | | | | |
| | | | | |
| ? | | This list should be completed when (and if ) any stage 2 TS is presented to SA "for information" | #26 | |
| | | | | |

## 11 Work item raporteurs

Mark Watson (Nortel Networks)

## 12 Work item leadership

SA 2

## 13 Supporting Companies

Nortel Networks, Cingular, Ericsson, Lucent,  TeliaSonera, TIM, Vodafone Group, NEC, Telefonica

## 14 Classification of the WI (if known)

| | |
|---|---|
| ~~X~~ | Feature (go to 14a) |
| X | Building Block (go to 14b) |
| | Work Task (go to 14c) |

14a     The WI is a Feature: List of building blocks under this feature

~~Building Blocks and Work Tasks are anticipated to be identified when the stage 2 is presented "for information".~~

14b     The WI is a Building Block: parent Feature

~~(one Work Item identified as a feature)~~
Feasibility Study on IMS with real time services deployments

14c     The WI is a Work Task: parent Building Block

(one Work Item identified as a building block)