Technical Specification Group Services and System Aspects **TSGS#23(04)0185**

Meeting #23, Phoenix, USA, 15 - 18 March 2004

**Title:** **Use cases for NRPCA**
**Source:** **Orange, T-Mobile**
**Agenda Item:**
**Presented for:** **Discussion & Decision**

# 1. Introduction

In the recent SA2 meeting during the discussion on the architecture for the Push service it was not possible to reach an agreement on whether we should standardise or not the mechanism to initiate a PDP context (including a signalling PDP context) from the network so that push data can be sent to the recipient. A show of hands took place however there was not a clear majority in favour of one or the other option.
This document presents some use cases that justify in the view of the authors the need to standardise the Network Requested PDP Context Activation (NRPCA).

Although the debate was mainly on push services, the authors believe that another important aspect to take into consideration is the decision of a PLMN to implement the "always on" paradigm in the near future. It is believed that some PLMNs will introduce "always on" graudally meaning that for a certain period of time there may be many users who do not have an active PDP context. The use cases presented here assume this.

It should also be noted that in the use cases presented the possible delay introduced by the competing architecture choice (SMS + WAP) is not always acceptable.

# 2. Use cases

## 2.1 MBMS service preparation

Saayman is subscribed to a multicast new service and does not have an active PDP context. Prior the start of the transmission of the MBMS contents, the network requests the activation of a PDP context. This activation needs to take place in a timely manner as not to lose the already paid for content.

## 2.2 PoC commuication

Kevin wants to send a PoC message to Hans who does not have an active PDP context. This may be due to the fact that Hans is not a heavy user of data services and the network then prefers to perform an activation "on demand". The network, using NRPCA activates a PDP context on the Hans' UE so that the communication can take place.

## 2.3 IMS person to person service

Nick wants to initiate an interactive communication with Tony over the IMS (say an IMS messaging session). Tony does not have an active PDP context for signalling, so the network using NRPCA establishes one automatically before transmitting the initial SIP messages to Tony and the communication can take place.

## 2.4 Non-IMS person to person service

Nicholas wants to initiate an interactive communication with Heinz over the PS domain (say a videotelephony call over PS domain). Heinz does not have an active PDP context, so the network using NRPCA establishes one automatically and the communication can take place.

## 2.5 Time critical push services

Paul Marcus is subscribed to a online betting service and needs to receive the latest odds prior placing his/her bets. Paul Marcus does not have an active PDP context so the service providers requests the network to use NRPCA.

## 2.6 Peer to Peer Servers

Eric has subscribed to a peer-to-peer server (e.g. Kazaa) and identifies that Arnaud has his favourite song available. However Arnaud does not have an activated PDP Context. So the network needs to be able to activate a PDP Context for Arnaud.

# 3. Conclusion

The authors of this paper believe that good motivations exist to justify the standardisation of NRPCA in Rel-6 in light of the above mentioned use cases.