

## BRIEF DESCRIPTION OF THE DRAWINGS

[0069] The foregoing and a better understanding of the present invention will become apparent from the following detailed description of example embodiments and the claims when read in connection with the accompanying drawings, all forming a part of the disclosure of this invention. While the foregoing and following written and illustrated disclosure focuses on disclosing example embodiments of the invention, it should be clearly understood that the same is by way of illustration and example only and the invention is not limited thereto. The spirit and scope of the present invention are limited only by the terms of the appended claims.

[0070] The following is a brief description of the drawings, wherein:

[0071] **FIG. 1** illustrates the steps in a PDP context activation procedure.

[0072] **FIG. 2** illustrates the steps in a secondary PDP context activation procedure.

[0073] **FIGS. 3-5** illustrate the steps respectively occurring in a SGSN-initiated, GGSN-initiated and MS-initiated PDP context modification procedure.

[0074] **FIGS. 6 and 7** also illustrate in detail the steps occurring in a call setup procedure.

[0075] **FIG. 8** illustrates an example of the steps occurring in a technique for providing announcements in mobile-originated calls in accordance with a present invention.

## DETAILED DESCRIPTION OF THE INVENTION

[0076] Before beginning a detailed description of the subject invention, mention of the following is in order. When appropriate, like reference numerals and characters may be used to designate identical, corresponding, or similar components in differing drawing figures. Furthermore, and the detailed description to follow, example sizes/models/values/ranges may be given, although the present invention is not limited thereto. Lastly, well-known elements may not be shown within the drawing figures for simplicity of illustration and discussion and so as not to obscure the invention.

[0077] In addition to the aforementioned Technical Specification, Technical Specification TS 23.228, Version V1.5.0, issued by the 3GPP in March, 2001, defines the stage-2 service description for the IP Multimedia (IM) Subsystem, which includes the elements necessary to support IP Multimedia (IM) services in UMTS. This technical specification is incorporated by reference herein in its entirety and, as in the case of the previously cited Technical Specification, the elements and their functions incorporated by reference herein are merely a non-limiting example of packet switched wireless communication networks and the present invention should not be construed as being limited thereto.

[0078] **FIG. 6**, which corresponds to **FIG. 5.7** of the TS 23.228 Technical Specification, illustrates in detail the following steps occurring in a call setup procedure:

[0079] 1. UE(A) starts a Session Initiation procedure to UE(B) that includes an SDP proposal.

[0080] 2. The user at UE(B) is pre-alerted. (optional)

[0081] 3. An indication of the pre-alerting may be sent towards UE(A). (optional)

[0082] 4. User at UE(B) will then interact and express his/her wishes regarding the actual session. (optional)

[0083] 5. UE(B) generates accepted SDP based on terminal settings, terminal reconfigured profiles and, optionally, the user's wishes.

[0084] 6. The accepted SDP is forwarded to UE(A) in the payload of a reliable SIP response.

[0085] 7. Initial bearer creation procedure is performed. During this bearer creation step, the resources in the UE(A)'s and UE(B)'s access network are reserved with PDP context procedures. Bearer resources in external networks may also be reserved at this point.

[0086] 8. Terminal at UE(B) starts ringing. (optional)

[0087] 9. The alerting indication is sent towards UE(A). (optional)

[0088] 10. User at UE(B) may interact and express his/her wishes regarding the actual session. (optional)

[0089] 11. UE(A) and UE(B) may perform bearer modification procedure at this point if the initial bearers reserved in step 7 and the wishes of user at UE(B) are different. During this bearer modification step, the resources in the UE(A)'s and UE(B)'s access network may be modified by modifying the PDP context, and the resource reservation in the external network may also be modified.

[0090] 12. Session initiation procedure is acknowledged.

[0091] Furthermore, **FIG. 7** illustrates the steps occurring in a call setup procedure and corresponds to the **FIG. 5.15** of Section 5.6.2 of the second cited Technical Specification. The following steps are also described therein.

[0092] 1. UE#1 sends the SIP INVITE request, containing an initial SDP, to the P-CSCF determined via the CSCF discovery mechanism. The initial SDP may represent one or more media for a multi-media session.

[0093] 2. P-CSCF remembers (from the registration procedure) the next hop CSCF for this UE. In this case it forwards the INVITE to the S-CSCF in the home network.

[0094] 3. S-CSCF validates the service profile, and performs any origination service control required for this subscriber. This includes authorisation of the requested SDP based on the user's subscription for multi-media services.

[0095] 4. S-CSCF forwards the request, as specified by the S-S procedures.

[0096] 5. The media stream capabilities of the destination are returned along the signalling path, per the S-S procedures.