

- [0097] 6. S-CSCF forwards the SDP message to P-CSCF
- [0098] 7. P-CSCF authorises the resources necessary for this session
- [0099] 8. P-CSCF forwards the SDP message to the originating endpoint.
- [0100] 9. UE decides the final set of media streams for this session, and sends the Final SDP to P-CSCF.
- [0101] 10. P-CSCF forwards this message to S-CSCF
- [0102] 11. S-CSCF forwards this message to the terminating endpoint, as per the S-S procedure.
- [0103] 12. After determining the final media streams in step #9, UE initiates the reservation procedures for the resources needed for this session.
- [0104] 13. When the resource reservation is completed, UE sends the "Resource Reservation Successful" message to the terminating endpoint, via the signalling path established by the INVITE message. The message is sent first to P-CSCF.
- [0105] 14. P-CSCF forwards this message to S-CSCF.
- [0106] 15. S-CSCF forwards this message to the terminating endpoint, as per the S-S procedure.
- [0107] 16. The destination UE may optionally perform alerting. If so, it signals this to the originating party by a provisional response indicating Ringing. This message is sent to S-CSCF per the S-S procedure.
- [0108] 17. S-CSCF forwards this message to P-CSCF.
- [0109] 18. P-CSCF forwards the ringing message to UE.
- [0110] 19. UE indicates to the originating subscriber that the destination is ringing.
- [0111] 20. When the destination party answers, the terminating endpoint sends a SIP 200-OK final response, as specified by the termination procedures and the S-S procedures, to S-CSCF.
- [0112] 21. S-CSCF performs any origination service control required by session setup completion.
- [0113] 22. S-CSCF passes the 200-OK response back to P-CSCF, following the path of the INVITE request of step (2) above.
- [0114] 23. P-CSCF indicates the resources reserved for this session should now be committed.
- [0115] 24. P-CSCF passes the 200-OK response back to UE
- [0116] 25. UE starts the media flow(s) for this session.
- [0117] 26. UE responds to the 200 OK with an ACK message which is sent to P-CSCF.
- [0118] 27. P-CSCF forwards the final ACK message to S-CSCF.
- [0119] 28. S-CSCF forwards the final ACK message to the terminating endpoint, per the S-S procedure. Oftentimes, however, it is necessary for the MS to receive a recorded announcement from the called party rather than connecting with the called party to carry on a conversation. In such a circumstance, the recorded announcement is outputted from a node at a different address than that of the called party and the technique in accordance with the present invention facilitates the initiation of a PDP context modification procedure to set the Traffic Flow Template (TFT) according to the Transport Address (TA) of the node.
- [0120] Referring to FIG. 8, which illustrates an example of a technique for providing announcements in mobile-originated calls in accordance with the present invention, in step #1, a setup message is sent from an MS to a peer.
- [0121] This setup message is intercepted by the network which has been instructed to forward an announcement message in response to a call setup to the called party. The machine that will play the announcement, referred to in the drawing figure as the Remote CSCF/REP, in step #2, acknowledges the setup message with a connect message including its IP address and Port number, that is, the Remote Equipment TA, so as to enable the MS to properly connect with it.
- [0122] Subsequently, in steps #3, #4, #5, #6, and #7, the MS activates a secondary PDP context which includes a TFT allowing the machine to send traffic to the MS. That is, the TFT includes the Remote Equipment TA, (that is, its IP address and Port number).
- [0123] In step #8, the MS acknowledges the acceptance of the secondary PDP context and in step #9, the Remote Equipment plays the announcement to the MS.
- [0124] Thus, in accordance with the present invention, upon an MS attempting to set up a call with a called party that wishes to respond with an announcement, the Remote Equipment machine designated by the called party to make such announcement provides its TA to the MS. The MS, in turn, activates a secondary PDP context with a TFT of the Remote Equipment to allow the Remote Equipment machine to forward its announcement to the MS.
- [0125] This concludes the description of the example embodiments. Although the present invention has been described with reference to an illustrative embodiment thereof, it should be understood that numerous other modifications and embodiments can be devised by those skilled in the art that will fall within the spirit and scope of the principles of this invention. More particularly, reasonable variations and modifications are possible in the component parts and/or arrangements of the subject combination arrangement within the scope of the foregoing disclosure, the drawings, and the appended claims without departing from the spirit of the invention. In addition to variations and modifications in the component parts and/or arrangements, alternative uses will be apparent to those skilled in the art.

What is claimed is:

1. A method of providing an announcement in a communications network, the method comprising: