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(73) Patenthaver: **Telefonaktiebolaget LM Ericsson (publ) , 164 83 Stockholm, Sverige**

(72) Opfinder: **LINDHOLM, Fredrik, Hornsbergsvägen 18, S-112 15 Stockholm, Sverige**
KELLER, Ralf, Talblick 22, 52146 Würselen, Tyskland

(74) Fuldmægtig i Danmark: **Zacco Denmark A/S, Arne Jacobsens Allé 15, 2300 København S, Danmark**

(54) Benævnelse: **Fremgangsmåde, indretning, computerprogram og computerprogram-produkt til overføring af en session fra et pakkekoblet adgangsnetværk til et kredsløbskoblet adgangsnetværk**

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DESCRIPTION

TECHNICAL FIELD

[0001] The present invention relates to the field of session transfer in a communication network.

BACKGROUND

[0002] Long Term Evolution (LTE) is a communication network technology currently under development by the 3rd Generation Partnership Project (3GPP). LTE requires a new radio access technique termed Evolved Universal Terrestrial Radio Access Network (E-UTRAN), which is designed to improve network capacity, reduce latency in the network, and consequently improve the end-user's experience. System Architecture Evolution (SAE) is the core network architecture for LTE communication networks.

[0003] LTE uses exclusively packet switched (PS) signalling. When a network operator wishes to introduce LTE, he will be unable to operate a complete LTE service from the first day. LTE will need to be rolled out gradually to replace existing technologies. In order to do this, LTE networks must have some way of interacting with networks that use other technology, such as circuit switched (CS) signalling. Single Radio Voice Call Continuity (SRVCC), described in 3GPP TS 23.237 and 3GPP TS 23.216, allows handover of a session from an LTE network to a CS network.

[0004] Referring to Figure 1, there is illustrated a scenario in which a User Equipment (UE) 1 has an established LTE bearer with ongoing speech session over an IP Multimedia Subsystem (IMS) in a location 2 with LTE coverage. The UE 1 then moves to a second location 3 in which LTE coverage is no longer available, but a legacy CS network provides coverage. The LTE network communicates with a Mobile Switching Centre (MSC) Server 4 to indicate that the session is to be handed over from the LTE network to the CS network. The MSC server 4 notifies the IMS network 5 of the handover. The IMS network then ensures that the session can be handled by the CS network.

[0005] Similarly, handover can take place from UTRAN (HSPA) using IMS to a CS access. In the below description, the example of LTE is used, but can be replaced with HSPA.

[0006] A problem arises when, for example, a video call is to be transferred from the LTE network to a PS network. The access network is not aware that the call to be moved from PS to CS access is a video call, and so the access network cannot identify a difference between bearers used when setting up the call to carry video from a video call, or bearers used for other video applications, such as a video sharing application or a Mobile TV session.

[0007] One suggestion (described in 3GPP TR 23.886v0.3.1) for video call SRVCC assumes that the access network can determine that a video call is taking place by looking at the bearers that have been established. Each bearer is assigned a Quality of Service Class Identifier (QCI) depending on the type of media that is being transported by the bearer. If one bearer with QCI=1 (indicating voice) and another bearer with QCI=2 (indicating video) exist, then it is assumed that the call is a video call, and should be transferred as such.

[0008] A problem with this solution is that is restricts the usage of existing bearers. While QCI=2 is typically used for the video component of a video call, QCI=2 can be used for other types of video, so requiring that QCI=2 is only used for video calls creates problems with backward compatibility with existing terminals and applications that may use QCI=2 for video uses other than video calls. Furthermore, the described in 3GPP TR 23.886v0.3.1 implies that only one bearer can use QCI=2. This is because video may be streamed using different applications, each using QCI=2, and there is no way of knowing from QCI=2 which bearer relates to the video call.

[0009] A further problem is that operators may wish to use QCI values other than 2 for video calls. For example, a network operator might wish to reserve QCI=2 for mobile TV in the network. This would not be possible in the solution described in 3GPP TR 23.886v0.3.1, as the detection of a video call would wrongly assume that the mobile TV video relates to a video call.

[0010] Note that this problem is not specific to video calls, but to any type of session where more than one bearer is required for the session. 3GPP TSG SA WG2 TD S2-102719, "Bearer identification for vSRVCC handover key issue" describes use of a correlation identifier, but this identifier is allocated to all bearers related to a single application.

SUMMARY

[0011] The present invention is defined by the appended indepndent claims.

[0012] According to a first aspect of the invention, there is provided a method of transferring a session from a packet switched access network to a circuit switched access network. A Mobility Management Entity (MME) receives a service type indicator from a gateway node. The service type indicator indicates a type of service for the session, wherein the session includes a plurality of bearers associated with a single service and is associated with those bearers used for the session. The service type indicated by the service type indicator is selected from any of a video call, a voice call, a facsimile message, an IP Multimedia Subsystem priority message and circuit switched data. The MME subsequently receives, from an eNodeB, an indication that the session is to be transferred from the packet switched network to the circuit switched access network. The MME determines the bearers associated with the session using the service type indicator, and initiates transfer of the session using those bearers. This ensures that the correct bearers are transferred regardless of whether or not identifiers such as QCI values

have been ascribed to other types of service.

[0013] As an option, the MME sends to a Mobile Switching Centre (MSC) Server an indication of the type of service to a MSC Server. The indication of the type of service allows the MSC to perform any of allocation of resources and invoking procedures relating to the type of service.

[0014] As a further option, the MME sends to a User Equipment (UE) involved in the session an indication that Single Radio Voice Call Continuity for the type of service has been invoked. In still a further option, the MME sends to the UE involved in the session an indication of the bearers associated with the session.

[0015] In an optional embodiment, prior to the MME receiving the service type indicator from the gateway node, a Policy Charging and Rules Function (PCRF), initiates bearers for the session and determines a service type. It then determines the service type indicator using the determined service type and sends the service type indicator to the gateway node for forwarding to the MME.

[0016] As an option, the packet switched network is selected from any of a Long Term Evolution (LTE) or High Speed Packet Access (HSPA) network.

[0017] According to a second aspect, there is provided an MME for use in a communication network. The MME is provided with a first receiver for receiving from a gateway node a service type indicator, the service type indicator indicating a type of service for a session handled by the MME, the session including a plurality of bearers associated with a single service, the service type indicator being associated with those bearers used for the session. The service type indicated by the service type indicator is selected from any of a video call, a voice call, a facsimile message, an IP Multimedia Subsystem priority message and circuit switched data. A memory is provided for storing the received service type indicator. A second receiver is provided for receiving from an eNodeB an indication that the session is to be transferred from a packet switched access network to a circuit switched access network. A processor is also provided for determining the bearers associated with the session using the service type indicator, and initiating transfer of the session using those bearers.

[0018] As an option, the MME is also provided with a first transmitter for sending to a MSC Server an indication of the type of service. The indication of the type of service is usable by the MSC to perform actions such as allocation of resources and invoking procedures relating to the type of service.

[0019] As a further option, the MME is provided with a second transmitter for sending to a UE involved in the session an indication that Single Radio Voice Call Continuity for the type of service has been invoked and an indication of the bearers associated with the session.

[0020] According to a third aspect, there is provided a PCRF node for use in a communication network. The PCRF node is provided with a receiver for receiving from a Call Session Control

Function (CSCF) node a message relating to setting up or upgrading of a session. The message includes an indication of a type of service used in the session. The session is to include a plurality of bearers associated with a single service, the indication of a type of service being associated with those bearers to be used for the session. The service type is selected from any of a video call, a voice call, a facsimile message, an IP Multimedia Subsystem priority message and circuit switched data. A processor is provided for setting up bearers for the session and generating a service type indicator for use in a subsequent session transfer from a packet switched network to a circuit switched access network. A transmitter is also provided for sending the service type indicator to a gateway node for subsequent forwarding to a MME.

[0021] According to a fourth aspect, there is provided a P-CSCF for use in a communication network. The P-CSCF is provided with a processor for determining a type of service being used for a packet switched session, wherein the session includes a plurality of bearers associated with a single service, and a transmitter for sending to a PCRF node a message, the message including an indication of the type of service being used. The service type is selected from any of a video call, a voice call, a facsimile message, an IP Multimedia Subsystem priority message and circuit switched data. The indication of the type of service being used is subsequently usable in the event of transfer of the session to a different access network. The indication of type of service being used is associated with those bearers used for the session

[0022] According to a fifth aspect, there is provided a MSC Server for use in a communication network. The MSC Server is provided with a receiver for receiving from a MME an indication of a type of service being used for a session, wherein the session includes a plurality of bearers associated with a single service, and the indication of the type of service being used for the session is associated with those bearers used for the session, in the event that the session is being transferred from a packet switched access network to a circuit switched access network. The service type is selected from any of a video call, a voice call, a facsimile message, an IP Multimedia Subsystem priority message and circuit switched data. A processor is also provided for, on the basis of the indication, either allocating resources for the session and invoking procedures for the session.

[0023] According to a sixth aspect, there is provided a computer program, comprising computer readable code which, when run on a computer device causes the computer device to behave as any of a MME, UE, a PCRF node, a P-CSCF node and a MSC Server according as described in any of the second to fifth aspects.

[0024] According to a seventh aspect, there is provided a computer program product comprising a computer readable medium and a computer program as described above in the sixth aspect, wherein the computer program is stored on the computer readable medium.

BRIEF DESCRIPTION OF THE DRAWINGS

[0025]

Figure 1 illustrates schematically in a block diagram a handover from an LTE network to a legacy CS network;

Figure 2 is a signalling diagram illustrating procedures during call establishment in an LTE network;

Figure 3 is a signalling diagram illustrating procedures during handover of a UE from an LTE network to a CS network;

Figure 4 illustrates schematically in a block diagram a Mobility Management Entity according to an embodiment of the invention;

Figure 5 illustrates schematically in a block diagram User Equipment according to an embodiment of the invention;

Figure 6 illustrates schematically in a block diagram a Policy Charging and Rules Function node according to an embodiment of the invention;

Figure 7 illustrates schematically in a block diagram a Mobility Proxy-Call Session Control Function according to an embodiment of the invention; and

Figure 8 illustrates schematically in a block diagram a Mobile Switching Centre Server according to an embodiment of the invention.

DETAILED DESCRIPTION

[0026] The invention avoids the problems associated with relying on QCI values to identify the service type by providing a service type indicator that can be used for access transfer when a session is transferred. The following description uses an example where the type of service is a video call, although it will be appreciated that the invention can apply to other types of service, such as fax or CS data services.

[0027] Referring to Figure 2 herein, when a UE 1 establishes a session (step S1) using an LTE network, a Proxy-Call Session Control Function (P-CSCF) 6 in the IMS network determines the type of service that is being used. Note also that step S1 can be performed in the event that a service type is changed during a session. For example, the same procedures apply when a voice call is upgraded to a video call.

[0028] In step S2, the P-CSCF communicates with a Policy Charging and Rules Function (PCRF) 7 to ensure that access resources are set up for the session. This includes setting up suitable bearers for the media being sent during the session. The P-CSCF 6 may also indicate to the PCRF 7 the service being used, for example by sending an IMS Communication Service Identifier (ICSI). As an extension, the P-CSCF may also indicate what type of service is being

used, for example a speech call, or a video call. This gives the PCRF 7 more information in order that it can determine how to handle the session, without requiring the PCRF to understand which ICSI maps to which service type. Note that there may be more than one service may be available that can be used to establish a video call, and any of these services should be capable of being transferred if a session moves from a PS to a CS access network.

[0029] In step S3, the PCRF 7 initiates the setting up of relevant bearers for the session (e.g., a QCI=1 bearer for the speech part of the video call and a QCI=x bearer for the video part of the video call), by interacting with the PDN Gateway (PGW) or Serving gateway (SGW) 8. The PCRF 7 also indicates to the PGW/SGW 8 that the session is related to a video call by sending a service type indicator to the PGW/SGW 8 indicating the type of service, for example "service type = video call". Examples of types of service that may be indicated include speech call, video call, CS data, IMS priority call or fax.

[0030] Note that in the event that the PCRF 7 only received the communication service used from the P-CSCF 6, the PCRF 7 will need to use a local policy to map the communication service to the service type and determine the relevant service type indicator.

[0031] In step S4, The PGW/SGW 8 interacts with a Mobility Management Entity (MME) 9 during the bearer allocation, as the MME is involved in the bearer activation/deactivation process. The MME is also responsible for selecting the SGW 8 and authenticating the UE and user by interacting with a Home Subscriber Server (HSS) in the IMS network. The PGW/SGW 8 sends the service type indicator to the MME 9. As a result, and for a video call, the MME 9 considers the bearer related to QCI=1 and QCI=x to be related to the service type indicator. In other words, if the service type indicator indicates that the session is a video call, the MME 9 relates QCI=1 and QCI=x to the video call.

[0032] If there is no need to transfer the session between access networks for the duration of the session, then the service type indicator will not be used. However, if there is a need to transfer the session from the LTE network to a CS access network, then SRVCC is triggered, as illustrated in Figure 3.

[0033] In step S5, an eNodeB 10 indicates to the MME 9 that the session is to be transferred to a CS network and that SRVCC is required.

[0034] In step S6, the MME 9 has knowledge of the service type indicator for the session subject to access transfer (for example, that it is a video call), and the bearers associated with the service type indicator. Therefore the MME 9 handles the QCI=x bearer (for the video part of the video call) in the same way as it handles the QCI=1 bearer for PS access transfer and for suspend/resume cases during SRVCC, as described in 3GPP TS 23.216 v9.4.0. In this way, the session is identified as relating to a video call, but there is no need to use QCI=2 as proposed in TR. 23.886 v.0.3.1 to identify the video part of the call, which allows operators more flexibility in assigning QCI values to video bearers.

[0035] In an optional embodiment, the MME 9 may decide not to execute the service type specific SRVCC procedures and instead execute only normal SRVCC. In this case, the MME 9 may still handle the QCI=x bearer in the same way as the QCI=1 bearer. This may occur where, for example, if a network operator does not wish to support the service type specific SRVCC procedures for this subscriber.

[0036] If configured to do so, the MME 9 indicates the type of service to the MSC Server 4 during the transfer. This may be done simply by forwarding the service type indicator to the MSC Server 4. This allows the MSC Server 4 to allocate resources for the video call or to invoke procedures specific to video calls. The MSC Server 4 performs the required actions and confirms to the MME 4 whether the service type specific SRVCC has been performed successfully, or whether only normal SRVCC has been performed. Normal SRVCC may be performed, for example, if the access used after the transfer does not support video call, e.g., GERAN.

[0037] In a further embodiment of the invention, as illustrated in step S7, the network (in other words, the MSC Server 4 and the MME 9) indicates towards the UE 1 that SRVCC procedures for the specific service type is being executed, and an indication of the bearers associated with the session. In situations in which the network may not be able to reliably execute video SRVCC, informing the UE 1 of the SRVCC procedures ensures that the UE 1 will not attempt to execute full video SRVCC procedures in a case where the network will not allow this. Such cases include, for example, local policies or a temporary lack of resources.

[0038] Referring to Figure 4, there is illustrated a MME 9. The MME 9 is provided with a first receiver 11 for receiving the service type indicator from the PGW/SGW 8. As described above, the service type indicator indicates the type of service being used in the session handled by the MME 9 and is associated with bearers used for the session. A computer readable medium in the form of a memory 12 is used to store the service type indicator. In the event of the session being transferred from one access type to another, a second receiver 13 receives (from the eNodeB 10) an indication that the session is to be transferred. A processor 14 is provided for determining the bearers associated with the session using the service type indicator, and initiating transfer of the session using those bearers.

[0039] The MME 9 may also be provided with a first transmitter 16 for communicating with the MSC Server 4 when it is required to send an indication of the type of service to the MSC Server in order to allow the MSC Server 4 to allocate resources or invoke special procedures A second transmitter 17 may also be provided for informing the UE 1 involved in the session that SRVCC for the type of service has been invoked and an indication of the bearers associated with the session.

[0040] The memory 12 may also be used to store a computer program 18 which, when run by the processor 14, causes the MME 9 to behave as described above.

[0041] Turning now to Figure 5, there is illustrated a UE 1. The UE 1 is provided with a

receiver 19 for receiving a message relating to transfer of the ongoing session from the packet switched access network to a circuit switched access from the MME 9. The message includes an indication that SRVCC for the type of service has been invoked and an indication of the bearers associated with the session. A processor 20 is also provided for determining further action on the basis of the indication that SRVCC for the type of service has been invoked and the indication of the bearers associated with the session.

[0042] A computer readable medium in the form of a memory 21 may also be provided. This may be used to store a computer program 22 which, when run by the processor 20, cause the UE 1 to behave as described above.

[0043] Figure 6 illustrates a PCRF 7. The PCRF 7 is provided with a receiver 23 for receiving from a P-CSCF 6 a message relating to setting up or upgrading of a session. As described above, the message includes an indication of a type of service used in the session. A processor 24 is provided for setting up or initializing bearers for the session and determining a service type indicator for use in a subsequent session transfer from a packet switched network to a circuit switched access network. This determination may either be a generation of the service type indicator or it may have been received from the P-CSCF 6. A transmitter 25 is provided for sending to the PGW/SGW 8 the service type indicator for subsequent forwarding to the MME 9.

[0044] A computer readable medium in the form of a memory 25 may also be provided. This may be used to store a computer program 26 which, when run by the processor 24, cause the PCRF 7 to behave as described above.

[0045] Referring to Figure 7, there is illustrated a P-CSCF 6, which is provided with a processor 29 for determining a type of service being used for a packet switched session. A transmitter 28 is provided for sending to a message to the PCRF 7, the message including an indication of the type of service being used.

[0046] A computer readable medium in the form of a memory 29 may also be provided. This may be used to store a computer program 30 which, when run by the processor 27, cause the P-CSCF 6 to behave as described above.

[0047] Figure 8 illustrates a MSC Server 4, which is provided with a receiver 31 for receiving from an indication of a type of service being used for a session from the MME 9. A processor 32 is provided for, on the basis of the indication, allocating resources for the session and/or invoking procedures for the session.

[0048] A computer readable medium in the form of a memory 33 may also be provided. This may be used to store a computer program 34 which, when run by the processor 32, cause the MSC Server 4 to behave as described above.

[0049] By using the procedures described above, the correct bearers will be transferred during

SRVCC procedures. Furthermore, a UE may use multiple bearers with same QCI value without risking that the "wrong" bearer is transferred during the transfer, or restricting the usage of bearer of one type to only one. The procedures described above also allow the network operator to decide on the QCI values used for video calls, which gives sufficient flexibility to allow different operators to use different QCI values for video, and also different QCI values for different subscribers.

[0050] It will be appreciated by the person of skill in the art that various modifications may be made to the above-described embodiments without departing from the scope of the present invention as described in the appended claims. For example, the above description refers to a LTE PS network, but the invention applies to other PS networks, for example a High Speed Packet Access (HSPA) network. Furthermore, the above description assumes that the type service used in the session is a video call. However, it will be appreciated that any type of service may be identified. Examples of such services include IMS priority calls, voice calls, CS data and fax messages.

[0051] The following abbreviations have been used in this specification:

3GPP
: 3rd Generation Partnership Project

BSC
: Base Station Controller

CS
: circuit switched

E-UTRAN
: Evolved Universal Terrestrial Radio Access Network

eNB
: eNodeB

HSPA
: High Speed Packet Access

ICSI
: IMS Communication Service Identifier

IMS
: IP Multimedia Subsystem

LTE
: Long Term Evolution

MME
: Mobility Management Entity

MSC
: Mobile Switching Centre

P-CSCF
: Proxy-Call Session Control Function

PCRF
: Policy Charging and Rules Function

PGW
: PDN Gateway

PS
: packet switched

RAN
: Radio Access Network

RNC
: Radio Network Controller

SAE
: System Architecture Evolution

SGW
: Serving Gateway

SIP
: Session Initiation Protocol

UE
: User Equipment

UTRAN
: UMTS Terrestrial Radio Access Network

REFERENCES CITED IN THE DESCRIPTION

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Non-patent literature cited in the description

- Bearer identification for vSRVCC handover key issue3GPP TSG SA WG2 TD S2-102719, [0010]

Patentkrav

1. Fremgangsmåde til overføring af en session af en tjenestetype, og for hvilken egnede flere bærere for de medier, der sendes i løbet af sessionen, er blevet oprettet og tildelt respektive QCI-værdier, fra et pakkekoblet adgangsnetværk til et kredsløbskoblet adgangsnetværk, hvilken fremgangsmåde omfatter:

ved en mobilitetshåndteringsenhed (9) at modtage (S4) fra en gateway-knude (8) en tjenestetypeindikator, hvor tjenestetypeindikatoren er ud over QCI-værdierne, der er tildelt til de flere bærere, der er oprettet til sessionen, og identificere en tjenestetype, der anvendes i sessionen, der håndteres af mobilitetshåndteringsenheden og er associeret med de flere bærere, der anvendes til sessionen, hvor tjenestetypeindikatoren er associeret med de flere bærere, der er oprettet til sessionen, hvor sættet af tjenestetyper omfatter et videoopkald, et stemmeopkald, en telefaxbesked, en IP Multimedia Subsystem-prioritetsbesked og kredsløbskoblede data;

ved mobilitetshåndteringsenheden (9) at modtage fra en eNodeB (10) en indikation af, at sessionen skal overføres fra det pakkekoblede netværk til det kredsløbskoblede adgangsnetværk;

ved mobilitetshåndteringsenheden (9) at bestemme (S6) de bærere, der er associeret med sessionen, under anvendelse af tjenestetypeindikatoren og initiere overførsel af sessionen under anvendelse af disse bærere.

2. Fremgangsmåde ifølge krav 1, yderligere omfattende:

ved mobilitetshåndteringsenheden (9) at sende (S7) til en mobilkoblingscenterserver (4) en indikation af tjenestetypen, hvor indikationen af tjenestetypen kan anvendes af mobilkoblingscentret til at udføre en hvilken som helst af allokering af ressourcer og aktiveringsprocedurer i relation til denne tjenestetype.

3. Fremgangsmåde ifølge krav 1 eller 2, yderligere omfattende:

ved mobilitetshåndteringsenheden (9) at sende til en brugerindretning (1), der deltager i sessionen, en indikation af, at Single Radio Voice Call Continuity for

tjenestetypen er blevet aktiveret.

4. Fremgangsmåde ifølge krav 3, yderligere omfattende at sende til en brugerindretning (1), der deltager i sessionen, en indikation af de bærere, der er associeret med sessionen.

5. Fremgangsmåde ifølge et hvilket som helst af kravene 1 til 4, yderligere omfattende, før mobilitetshåndteringsenheden (9) modtager (S4) tjenestetypeindikatoren fra gateway-knuden (8):
ved en Policy Charging and Rules Function (7) at initiere bærere til sessionen og bestemme en tjenestetype;
at bestemme (S3) tjenestetypeindikatoren under anvendelse af den bestemte tjenestetype og sende tjenestetypeindikatoren til gateway-knuden (8) til videresendelse til mobilitetshåndteringsenheden (9).

6. Fremgangsmåde ifølge et hvilket som helst af kravene 1 til 5, hvor det pakkekoblede netværk er udvalgt blandt et hvilket som helst af et Long Term Evolution- eller High Speed Packet Access-netværk.

7. Mobilitetshåndteringsenhed (9) til anvendelse i et kommunikationsnetværk, hvor mobilitetshåndteringsenheden omfatter:
en første modtager (11) til modtagelse fra en gateway-knude (8) af en tjenestetypeindikator, hvor tjenestetypeindikatoren er ud over QCI-værdier, der er tildelt til flere bærere, der er oprettet til en session, og identificering af en tjenestetype, der anvendes i sessionen, der håndteres af mobilitetshåndteringsenheden og er associeret med de flere bærere, der anvendes til sessionen, og for hvilken session egnede flere bærere for de medier, der sendes i løbet af sessionen, er blevet oprettet og tildelt respektive QCI-værdier, hvor tjenestetypeindikatoren er associeret med disse flere bærere, der anvendes til sessionen, hvor sættet af tjenestetyper omfatter et videoopkald, et stemmeopkald, en telefaxbesked, en IP Multimedia Subsystem-prioritetsbesked og kredsløbskoblede data;
en hukommelse (12) til lagring af den modtagne tjenestetypeindikator;

en anden modtager (13) til modtagelse fra en eNodeB (10) af en indikation af, at sessionen skal overføres fra et pakkekoblet adgangsnetværk til et kredsløbskoblet adgangsnetværk; og
en processor (14) til bestemmelse af de bærere, der er associeret med sessionen, under anvendelse af tjenestetypeindikatoren og initiering af overførsel af sessionen under anvendelse af disse bærere.

8. Mobilitetshåndteringsenhed (9) ifølge krav 7, yderligere omfattende:
en første transmitter (16) til at sende til en mobilkoblingscenterserver (4) en indikation af tjenestetypen, hvor indikationen af tjenestetypen kan anvendes af mobilkoblingscentret til at udføre en hvilken som helst af allokering af ressourcer og aktiveringsprocedurer i relation til denne tjenestetype.

9. Mobilitetshåndteringsenhed (9) ifølge krav 7 eller 8, yderligere omfattende
en anden transmitter (17) til at sende til en brugerindretning (1), der deltager i sessionen, en indikation af, at Single Radio Voice Call Continuity for tjenestetypen er blevet aktiveret, og en indikation af de bærere, der er associeret med sessionen.

10. Computerprogram, omfattende en computerlæsbar kode, der, når den køres på en computerindretning, får computerindretningen til at opføre sig som en hvilken som helst af en mobilitetshåndteringsenhed ifølge et hvilket som helst af kravene 7 til 9.

11. Computerprogramprodukt omfattende et computerlæsbart medium og et computerprogram ifølge krav 10, hvor computerprogrammet er lagret på det computerlæsbare medium.

DRAWINGS

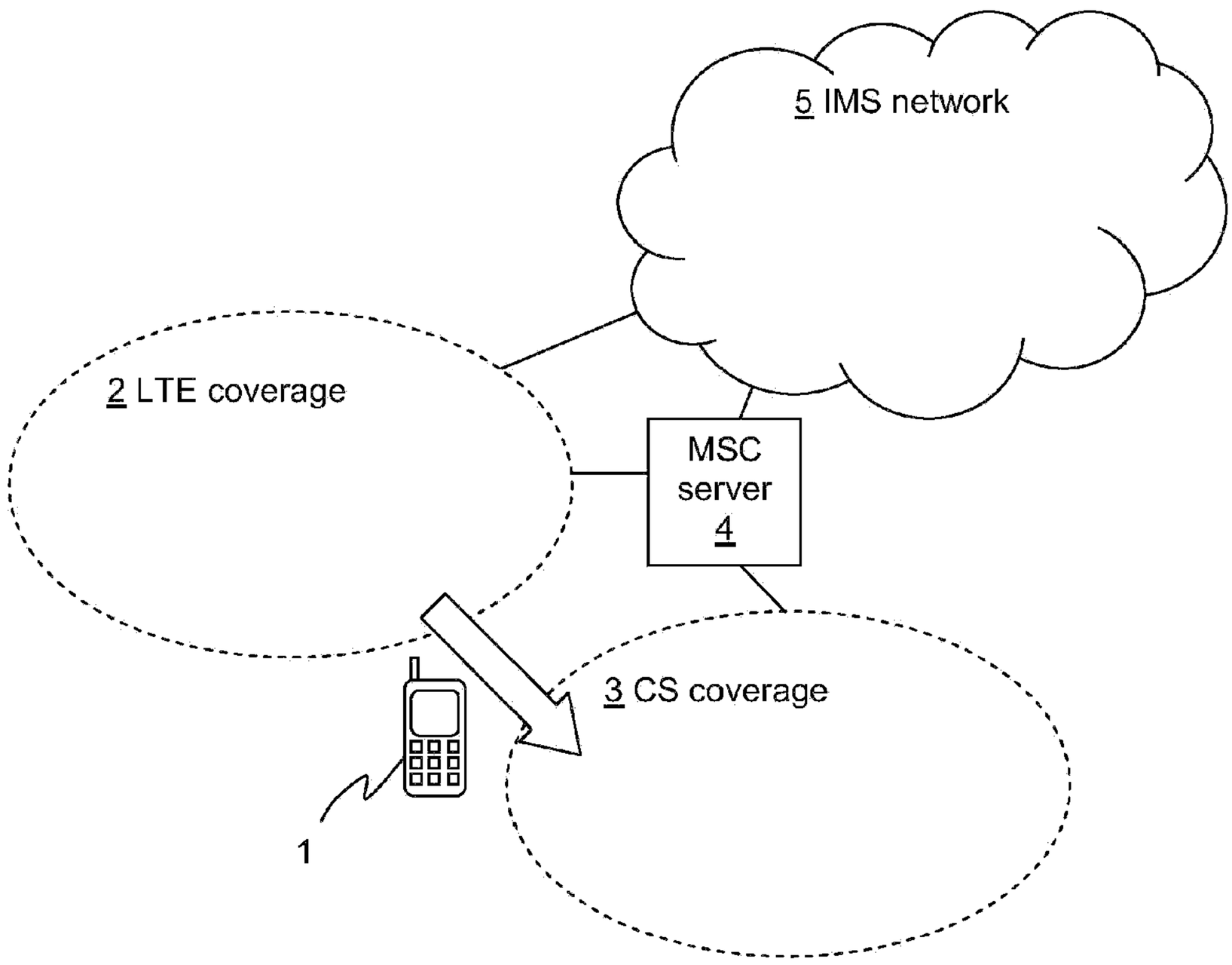

Figure 1 (prior art)

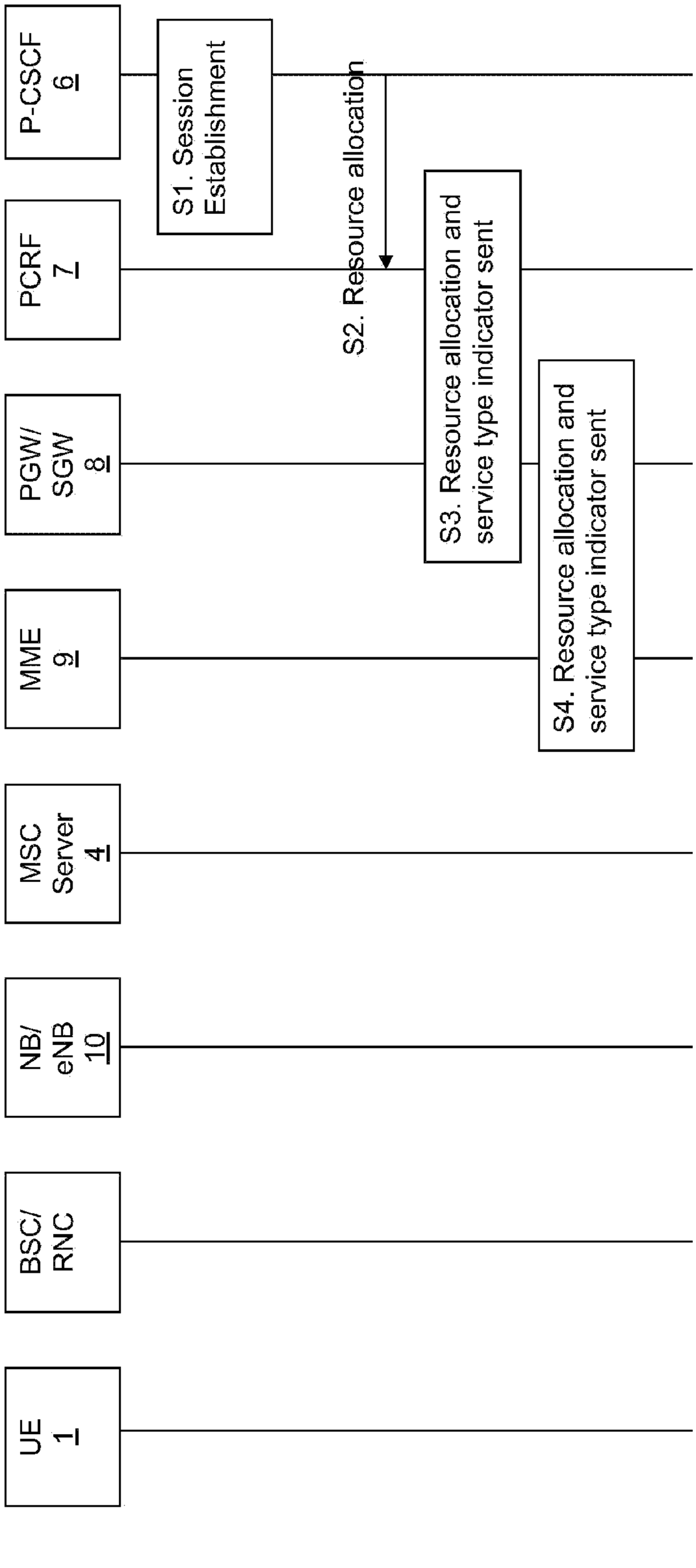
P-CSCF 6
PCRF 7
PGW/ SGW 8
MME 9
MSC Server 4
NB/ eNB 10
BSC/ RNC
UE 1
S1. Session Establishment
S2. Resource allocation
S3. Resource allocation and service type indicator sent
S4. Resource allocation and service type indicator sent

Figure 2

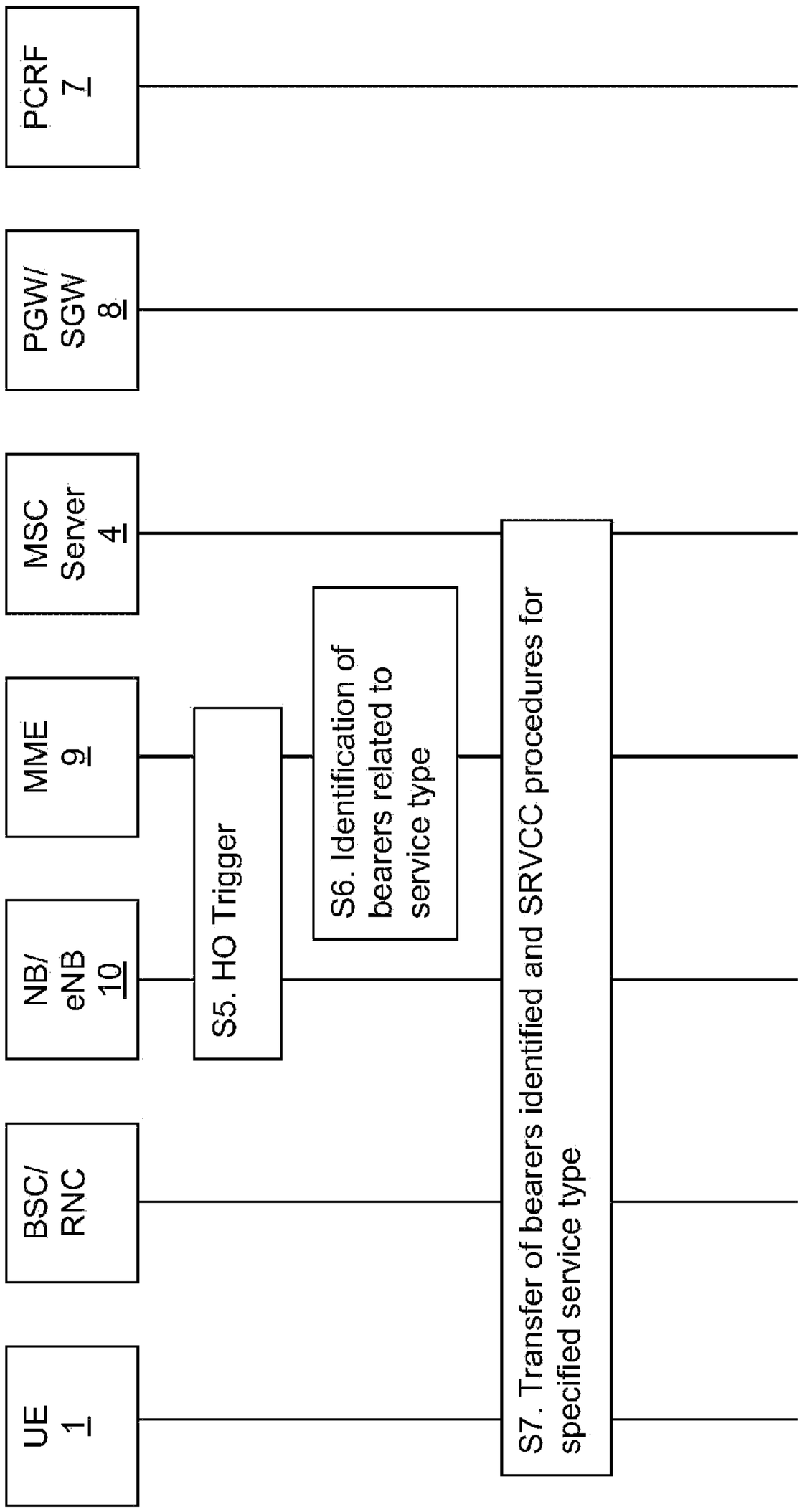
UE 1
BSC/ RNC
NB/ eNB 10
MME 9
MSC Server 4
PGW/ SGW 8
PCRF 7
S5. HO Trigger
S6. Identification of bearers related to service type
S7. Transfer of bearers identified and SRVCC procedures for specified service type

Figure 3

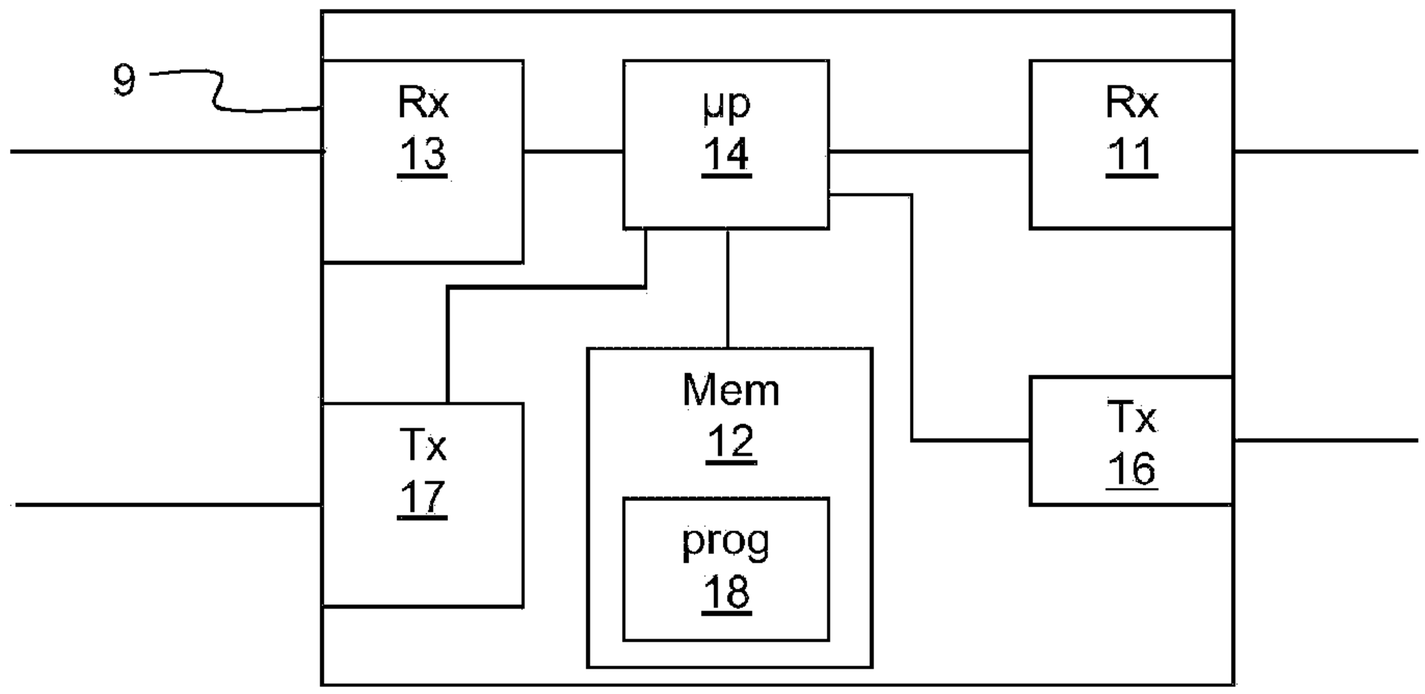

Figure 4

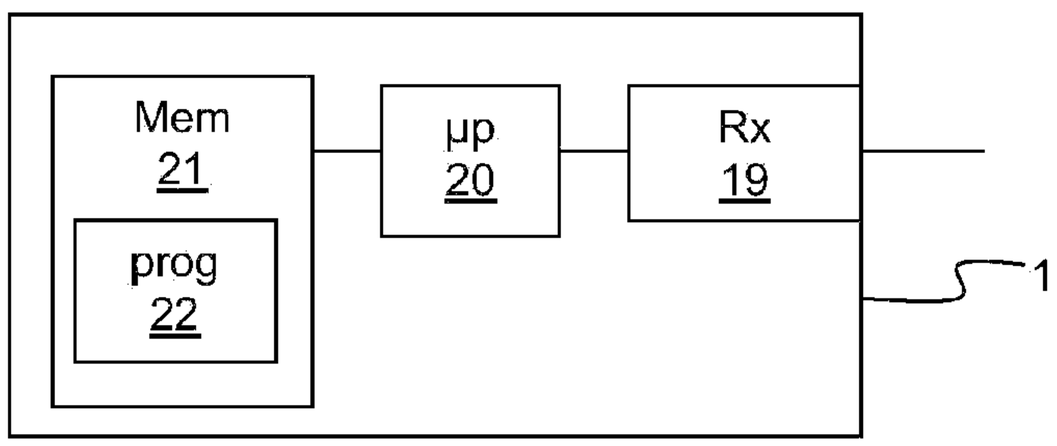

Figure 5

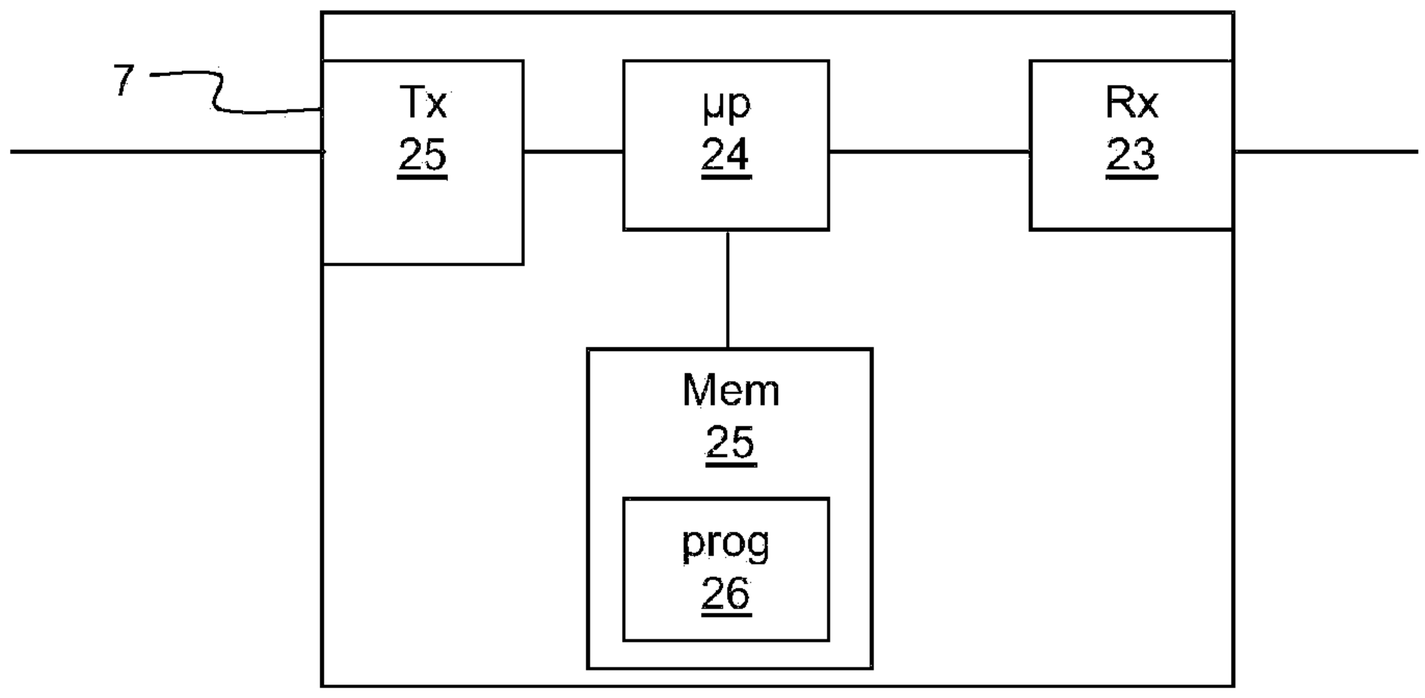

Figure 6

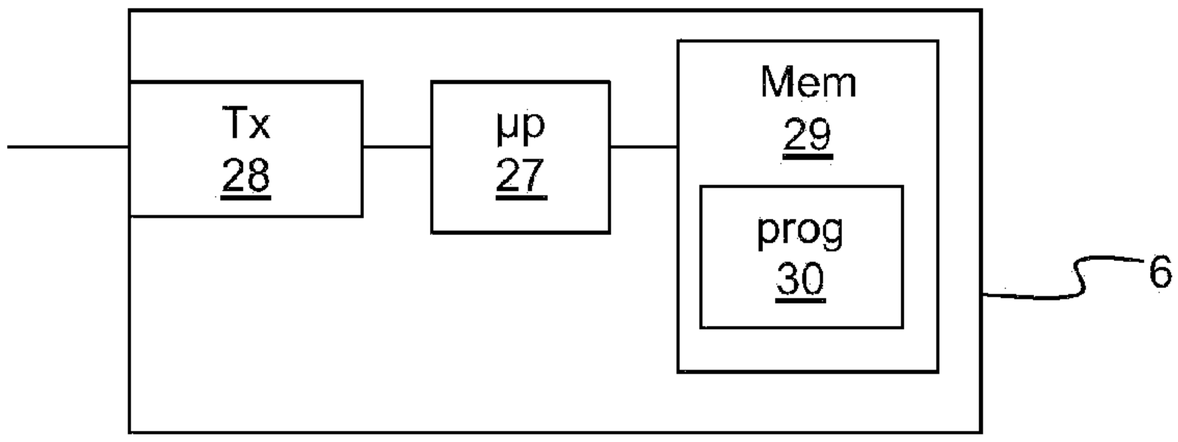

Figure 7

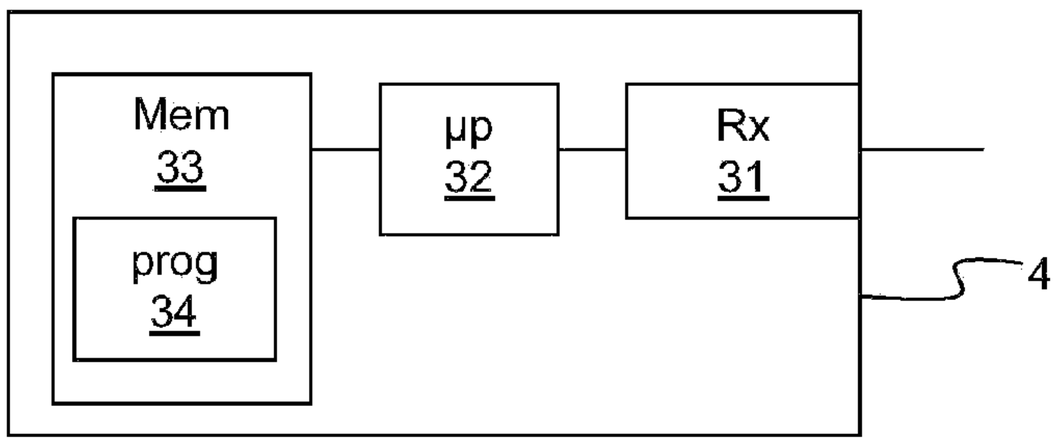

Figure 8