

Claims

1. A method of differentiating data traffic in a communication network, the method
5 comprising:
a policy controller (30) of the communication network determining an identifier of a subscriber
associated with a user equipment (10) connected to the communication network;
on the basis of a location of the user equipment (10) and/or a time schedule, the policy
controller (30) performing a selection between at least a first set of one or more content
10 filtering rules and a second set of one or more content filtering rules related to the identifier of
the subscriber; and
the policy controller (30) indicating a result of the selection to at least one node (34, 36)
configured to perform, on the basis of the selected set of one or more content filtering rules,
content filtering of data traffic of the user equipment (10).
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2. The method according to claim 1, further comprising:
the policy controller (30) assigning a content filtering identifier to the data traffic of the user
equipment (10); and
the policy controller (30) indicating the result of the selection by providing the content filtering
20 identifier to said at least one node (34, 36),
said content filtering identifier being usable by said at least one node (34, 36) to determine
the selected set of one or more content filtering rules.
3. The method according to claim 1, comprising:
25 the policy controller (30) indicating the result of the selection by providing the selected set of
one or more content filtering rules to said at least one node.
4. The method according to any one of the preceding claims,
wherein said selection is further based on subscriber profile data related to the subscriber.
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5. The method according to claim 4,
wherein the subscriber profile data classify the subscriber into a category of subscribers
having the same content filtering requirements.
- 35 6. The method according to any one of the preceding claims,
wherein the policy controller (30) determines the identifier of the subscriber in response to
the user equipment (10) connecting to the communication network.

7. A method of differentiating data traffic in a communication network, the method comprising:

a node (34, 36) of the communication network receiving, from a policy controller (30), an indication of a result of a selection between at least a first set of one or more content filtering rules and a second set of one or more content filtering rules related to an identifier of a subscriber associated with a user equipment (10) connected to the communication network, said selection being based on a location of the user equipment (10) and/or a time schedule; and

on the basis of the selected set of one or more content filtering rules, the node (34, 36) performing content filtering of data traffic of the user equipment (10).

8. The method of claim 7,

wherein the received indication comprises a content filtering identifier assigned to the data traffic of the user equipment (10); and

wherein the node (34, 36) determines the selected set of one or more content filtering rules from the content filtering identifier.

9. The method according to claim 8, wherein said determining the selected set of one or more content filtering rules comprises:

the node (34, 36) sending a request including the content filtering identifier to a content filtering policy server (60); and

the node (34, 36) receiving a response to the request from the content filtering policy server (60), the response comprising at least a part of the selected set of one or more content filtering rules.

10. The method according to claim 7,

wherein the received indication comprises the selected set of one or more content filtering rules.

11. The method according to any one of claims 7 to 10, further comprising:

the node (34, 36) sending a request including a content identifier to a content filtering policy server;

the node (34, 36) receiving a response to the request from the content filtering policy server (60), the response indicating a type of content corresponding to said content identifier; and

wherein said content filtering performed by the node is further based on the indicated type of content.

12. A policy controller (30) for a communication network, the policy controller (30) comprising:

a processor (150) configured to determine an identifier of a subscriber associated with a user equipment (10) connected to the communication network and to perform, on the basis of a location of the user equipment (10) and/or on the basis of a time schedule, a selection between at least a first set of one or more content filtering rules and a second set of one or more content filtering rules related to the identifier of the subscriber; and

an interface (120) for indicating a result of the selection to at least one node (34, 36) configured to perform, on the basis of the selected set of one or more content filtering rules, content filtering of data traffic of the user equipment (10).

13. The policy controller (30) according to claim 12,

wherein the policy controller (30) is configured to operate in accordance with the method according to any one of claims 1 to 6.

14. A node (34, 36) for a communication network, the node (34, 36) comprising:

an interface (220) for receiving, from a policy controller (30), an indication of a result of a selection between at least a first set of one or more content filtering rules and a second set of one or more content filtering rules related to an identifier of a subscriber of a user equipment (10) connected to the communication network, said selection being based on a location of the user equipment (10) and/or a time schedule; and

a processor (250) configured to perform, on the basis of the selected set of one or more content filtering rules, content filtering of data traffic of the user equipment (10).

15. The node according to claim 14,

wherein the node (34, 36) is configured to operate in accordance with the method according to any one of claims 7 to 11.

16. A system for differentiating data traffic in a communication network, the system comprising:

a policy controller (30) and at least one node (34, 36),

wherein the policy controller (30) is configured to determine an identifier of a subscriber associated with a user equipment connected to the communication network, to perform, on the basis of a location of the user equipment (10) and/or on the basis of a time schedule, a selection between at least a first set of one or more content filtering rules and a second set of content filtering rules related to the identifier of the subscriber, and

wherein the node (34, 36) is configured to perform, on the basis of the selected set of one or more content filtering rules, content filtering of data traffic of the user equipment (10).

17. The system according to claim 16, wherein the policy controller (30) is configured to operate in accordance with the method according to any one of claims 1 to 6 and the node (34, 36) is configured to operate in accordance with the method according to any one of claims 7 to 11.

18. A computer program product comprising computer readable program code that, when executed by a processor (150) of a policy controller (30) of a communication network, causes the policy controller (30) to carry out the steps of a method according to any one of claims 1 to 6.

19. A computer program product comprising computer readable program code that, when executed by a processor (250) of a node (34, 36) of a communication network, causes the node (34, 36) to carry out the steps of a method according to any one of claims 7 to 11.

Dated this the 30th day of December, 2014

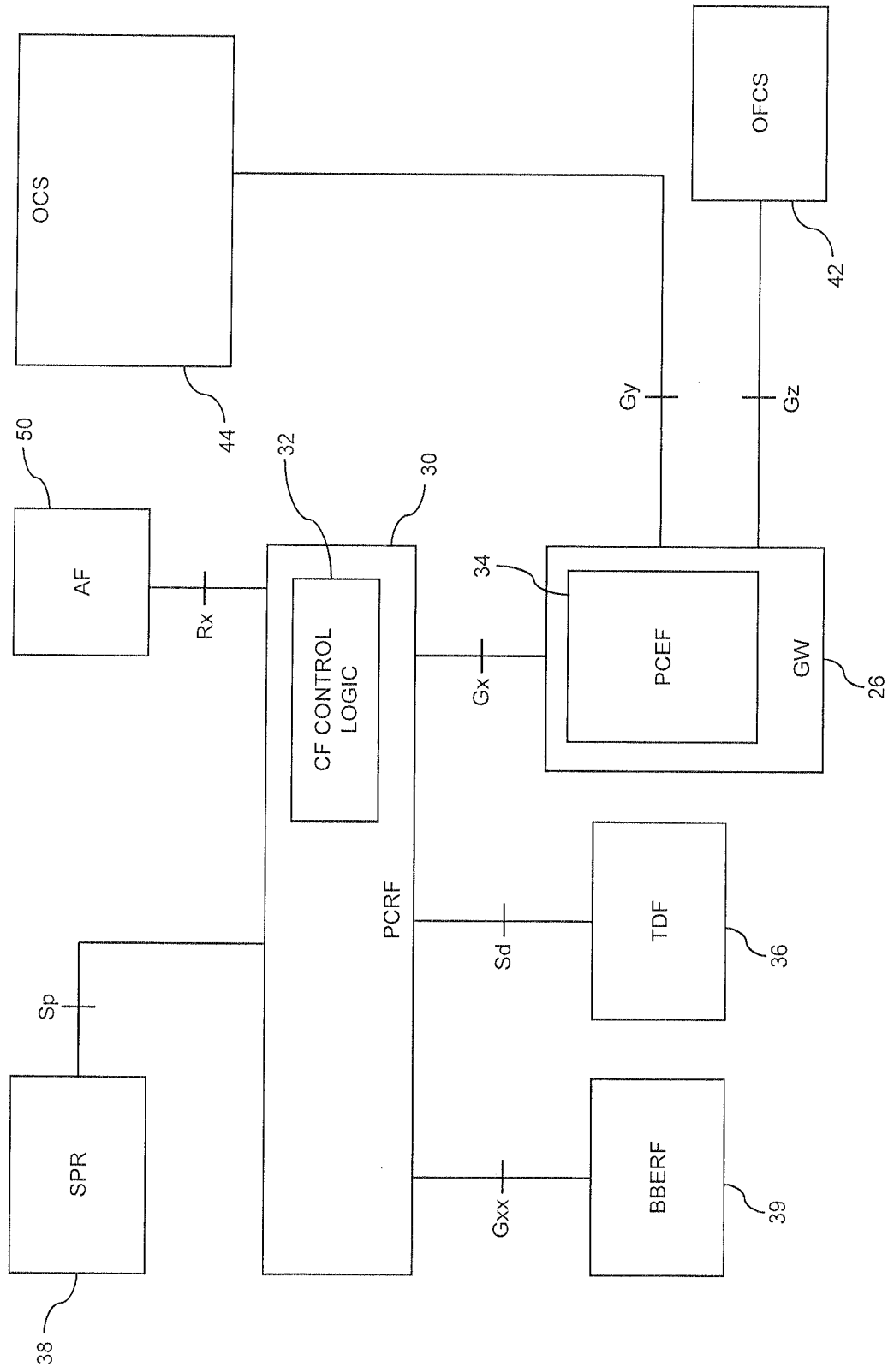


FIG. 1

DYNAMIC CF GROUP				
STATIC CF GROUP		LOCATION A	LOCATION B	LOCATION C
SUBSCRIBER TYPE 1	TIMESLOT 1	GROUP 1-1.1	GROUP 1-1.2	GROUP 1-1.3
	TIMESLOT 2	GROUP 1-2.1	GROUP 1-2.2	GROUP 1-2.3
SUBSCRIBER TYPE 2	TIMESLOT 1	GROUP 2-1.1	GROUP 2-1.2	GROUP 2-1.3
	TIMESLOT 2	GROUP 2-2.1	GROUP 2-2.2	GROUP 2-2.3
SUBSCRIBER TYPE 3	TIMESLOT 1	GROUP 3-1.1	GROUP 3-1.2	GROUP 3-1.3
	TIMESLOT 2	GROUP 3-2.1	GROUP 3-2.2	GROUP 3-2.3

FIG. 2

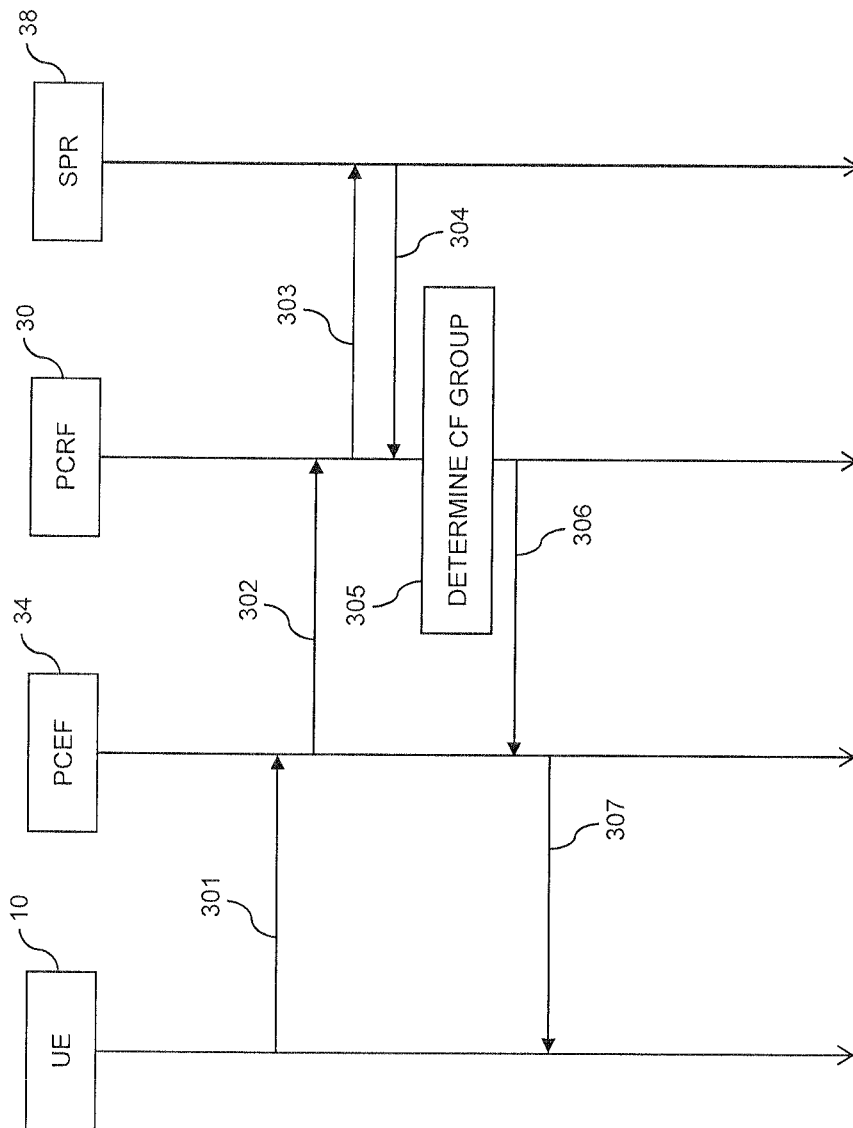


FIG. 3

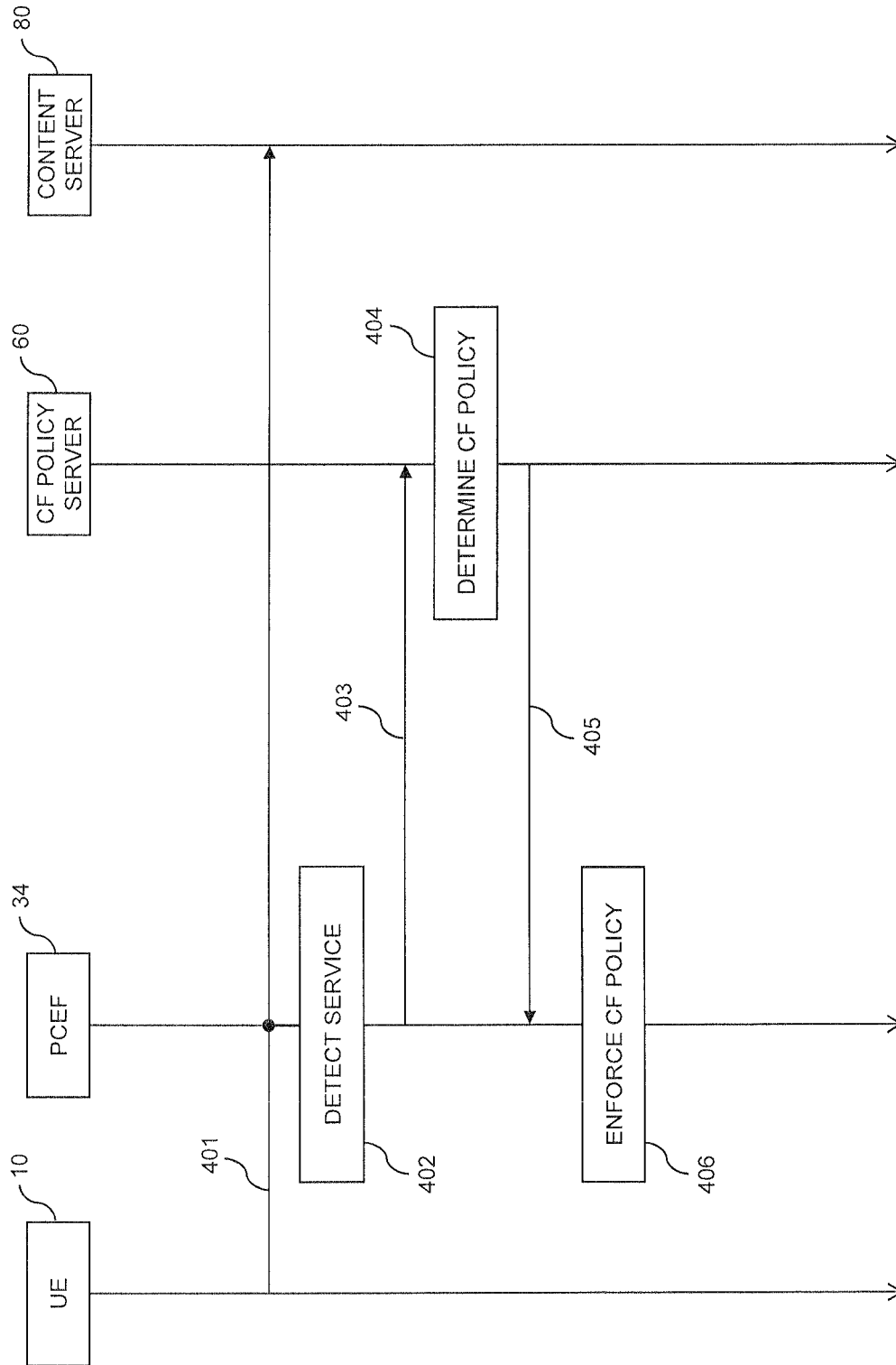


FIG. 4


```
REQMOD icap://icap-server.net/server?arg=87 ICAP/1.0
Host: icap-server.net
Encapsulated: req-hdr=0, null-body=170
Group-Identifier: "Group 1-2.1"

GET / HTTP/1.1
Host: www.contentserver.com
Accept: text/html, text/plain
Accept-Encoding: compress
```

FIG. 5

	CF POLICY	
	ALLOW	BLOCK
CF IDENTIFIER 1	WEATHER, INFANTS	ADVERTISEMENT, ADULT, VIOLENCE, NEWS
CF IDENTIFIER 2	ALL CONTENT	NOTHING
CF IDENTIFIER 3	WEATHER, NEWS, ADVERTISEMENT	ADULT, VIOLENCE

FIG. 6

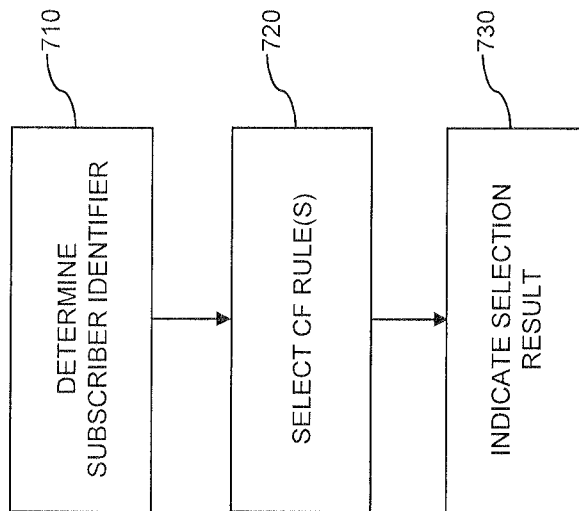


FIG. 7

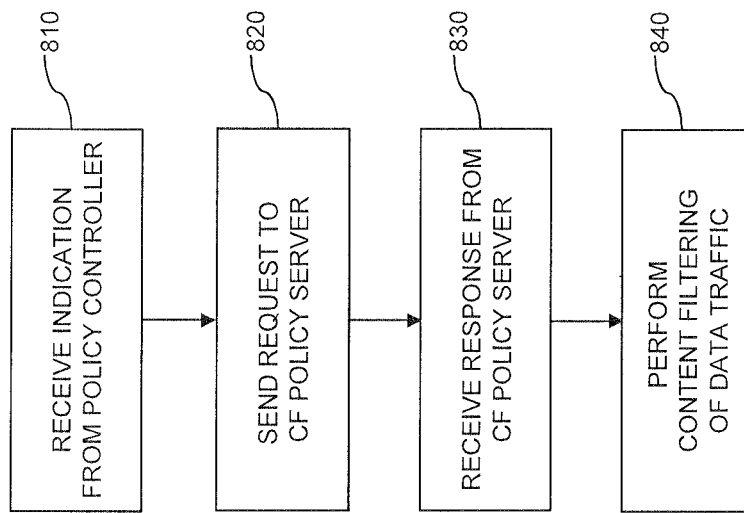


FIG. 8

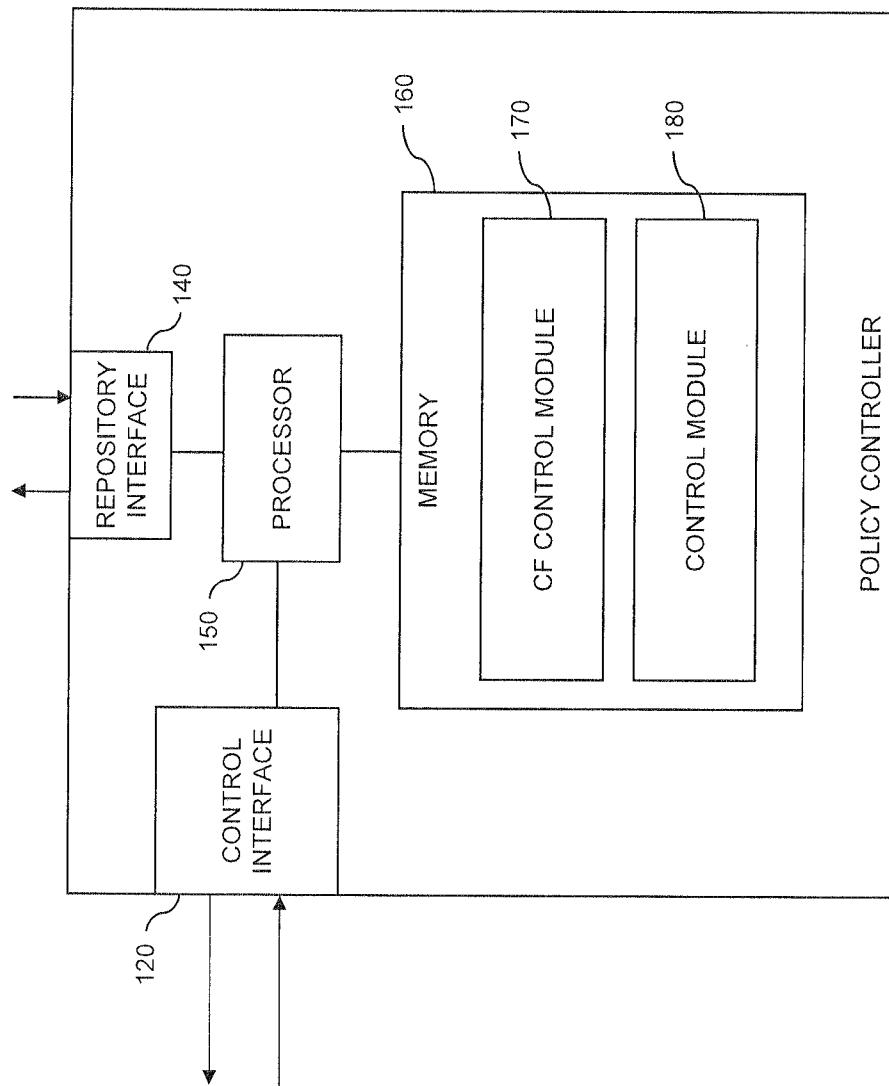


FIG. 9

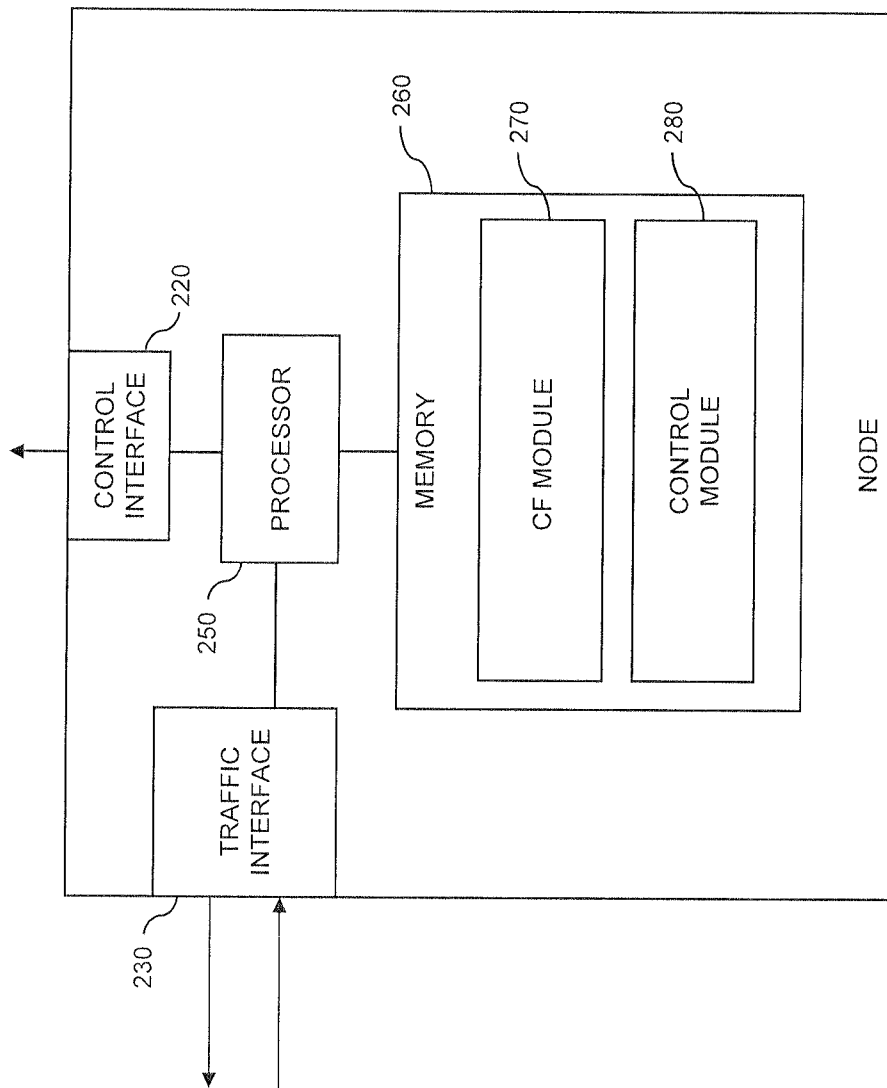


FIG. 10