

U.S. PATENT NO. 11,259,338 CLAIM LISTING

No.	Feature/Limitation
1[p]	1. A method for assisting in handling of connection setup requests in a telecommunications network, the method comprising:
1[a]	intercepting, by a node, a connection setup request from a user equipment (UE) to a control node of a radio access network (RAN) part of the telecommunications network;
1[b]	identifying, by the node, from the connection setup request, a service for which the connection setup is requested;
1[c]	determining, by the node, that the identified service is not an emergency service;
1[d]	determining, by the node, whether the connection setup request is to be fulfilled based at least on information comprising available resources in a network access point (NAP) serving the UE that are not reserved for premium services,
1[e]	a determination being a positive determination if, at the NAP serving the UE, there is sufficient unused resource capacity that is not reserved for the connection setup requests for the one or more premium services; and
1[f]	passing, by the node, the connection setup request for further processing within the telecommunications network only upon positive determination.
2	2. The method according to claim 1, wherein the determination of whether the connection setup request is to be fulfilled is further based on one or more agreements with one or more service providers regarding resource capacity in an access network part of the telecommunications network.
3	3. The method according to claim 2, wherein the one or more agreements comprise reservation, at the NAP serving the UE, of

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	a predefined resource capacity for connection setup requests for one or more premium services.
4	4. The method according to claim 3, wherein the predefined resource capacity is set as a percentage of the total resource capacity of the NAP.
5	5. The method according to claim 3, wherein the predefined resource capacity is set as a predefined amount of the total resource capacity of the NAP, the predefined amount being less than the total resource capacity of the NAP.
6	6. The method according to claim 3, wherein the predefined resource capacity is dynamically adjusted.
7[a]	7. The method according to claim 3, further comprising: determining that the identified service is not one of the one or more premium services and,
7[b]	optionally, determining that the identified service is not one of one or more additional premium services.
8	8. The method according to claim 1, further comprising providing an indication to the UE of whether the connection setup request was determined to be fulfilled.
9[p]	9. A computer program product, stored on a computer-readable non-transitory storage medium, comprising software code portions configured for, when executed in a computer, carrying out a method comprising:
9[a]	intercepting, by a node, a connection setup request from a user equipment (UE) to a control node of a radio access network (RAN) part of the telecommunications network;
9[b]	identifying, by the node, from the connection setup request, a service for which the connection setup is requested;
9[c]	determining, by the node, that the identified service is not an emergency service;

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9[d]	determining, by the node, whether the connection setup request is to be fulfilled based at least on information comprising available resources in a network access point (NAP) serving the UE that are not reserved for premium services,
9[e]	a determination being a positive determination if, at the NAP serving the UE, there is sufficient unused resource capacity that is not reserved for the connection setup requests for the one or more premium services; and
9[f]	passing, by the node, the connection setup request for further processing within the telecommunications network only upon positive determination.
10[p]	10. A data structure stored in a non-transitory computer-readable storage medium of a node, the data structure comprising at least:
10[a]	an indication of a resource capacity of a network access point (NAP) reserved for connection setup requests for one or more premium services;
10[b]	an indication of an amount of resources currently used by the NAP for the one or more premium services; and
10[c]	an indication of an amount of resources currently used by the NAP for services that do not belong to the one or more premium services;
10[d]	the data structure, used by the node, to determine whether the connection setup requests are to be fulfilled based at least on information comprising available resources in the NAP serving the UE that are not reserved for premium services,
10[e]	a determination being a positive determination if, at the NAP serving the UE, there is sufficient unused resource capacity that is not reserved for the connection setup requests for the one or more premium services; and

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10[f]	passing, by the node, the connection setup request for further processing within the telecommunications network only upon positive determination.
11[p]	11. A node comprising:
11[a]	a computer readable storage medium having computer readable program code embodied therewith, and
11[b]	a processor coupled to the computer readable storage medium, wherein responsive to executing the computer readable program code, the processor is configured to perform executable operations comprising:
11[c]	intercepting a connection setup request from a user equipment (UE) to a control node of a radio access network (RAN) part of a telecommunications network;
11[d]	identifying, from the connection setup request, a service for which the connection setup is requested;
11[e]	determining that the identified service is not an emergency service;
11[f]	determining whether the connection setup request is to be fulfilled based at least on information comprising available resources in the network access point (NAP) serving the UE that are not reserved for premium services,
11[g]	a determination being a positive determination if, at the NAP serving the UE, there is sufficient unused resource capacity that is not reserved for the connection setup requests for the one or more premium services; and
11[h]	passing the connection setup request for further processing within the telecommunications network only upon positive determination.
13[p]	13. The node according to claim 11, wherein:

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13[a]	the node is communicatively connected to a computer-readable storage medium storing a data structure comprising at least:
13[b]	an indication of a resource capacity of a network access point (NAP) reserved for connection setup requests for one or more premium services;
13[c]	an indication of an amount of resources currently used by the NAP for the one or more premium services;
13[d]	an indication of an amount of resources currently used by the NAP for services that do not belong to the one or more premium services; and
13[e]	the information regarding resource use within the NAP serving the UE comprises at least a portion of information stored on the computer-readable storage medium.
14[p]	14. A system comprising:
14[a]	a node comprising:
14[b]	a computer readable storage medium having computer readable program code embodied therewith, and
14[c]	a processor coupled to the computer readable storage medium, wherein responsive to executing the computer readable program code, the processor configured to perform executable operations comprising:
14[d]	intercepting a connection setup request from a user equipment (UE) to a control node of a radio access network (RAN) part of a telecommunications network;
14[e]	identifying, from the connection setup request, a service for which the connection setup is requested;
14[f]	determining that the identified service is not an emergency service;

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14[g]	determining whether the connection setup request is to be fulfilled based at least on information comprising available resources in the network access point (NAP) serving the UE that are not reserved for premium services,
14[h]	a determination being a positive determination if, at the NAP serving the UE, there is sufficient unused resource capacity that is not reserved for the connection setup requests for the one or more premium services; and
14[i]	passing the connection setup request for further processing within the telecommunications network only upon positive determination; and
14[j]	a computer-readable storage medium storing a data structure comprising at least:
14[k]	an indication of a resource capacity of a network access point (NAP) reserved for connection setup requests for one or more premium services;
14[l]	an indication of an amount of resources currently used by the NAP for the one or more premium services; and
14[m]	an indication of an amount of resources currently used by the NAP for services that do not belong to the one or more premium services.