

U.S. Patent No. 11,770,3131 – Claim Listing

Claim No.	Claim Language
1[pre]	A communication system comprising:
1[a]	a first interface coupled to a first communication unit, the first interface receives a first set of collected data associated with a first network managed by the first communication unit;
1[b]	a second interface coupled to a second communication unit, the second interface receives a second set of collected data associated with a second network managed by the second communication unit, the second network being a different network than the first network;
1[c]	a memory coupled to the first and second interfaces, the memory stores the first and second sets of collected data;
1[d]	a processor coupled to the memory, the processor generates at least one policy based at least in part on an analysis of the first and second sets of collected data; and
1[e]	a third interface coupled to the processor, the third interface transmits, in response to the processor determining a change in performance in at least one of the first network or the second network, the at least one policy to the first communication unit that makes a performance-related adjustment within the first network based on the at least one policy.
2	The communication system of claim 1 wherein the adjustment within the first network is an implementation of an algorithm.
3	The communication system of claim 1 where in the adjustment within the first network is a change in a parameter value.
4	The communication system of claim 1 wherein the first communication unit reduces interference in the second network based on an implementation of the at least one policy within the first network.
5	The communication system of claim 4 wherein the at least one policy adjusts channel transmission characteristics of at least one wireless channel within the first network.
6	The communication system of claim 5 wherein the channel transmission characteristics comprise a modification to a transmission band across the at least one wireless channel within the first network.

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7	The communication system of claim 1 wherein the first and second sets of collected data comprise historical data.
8[pre]	The communication system of claim 1 wherein the processor:
8[a]	generates a first control signal that is sent to the first communication unit at a first pre-defined time, the first control signal comprising a first policy adjustment to the first network; and
8[b]	generates a second control signal that is sent to the second communication unit at a second pre-defined time, the second control signal comprising a second policy adjustment to the second network.
9	The communication system of claim 8 wherein the first pre-defined time and the second pre-defined time are different.
10	The communication system of claim 8 wherein the first policy adjustment and the second policy adjustment are different.
11	The communication system of claim 1 wherein the first and second communication units are Wi-Fi access points.
12	The communication system of claim 1 wherein the first and second communication units are cellular base stations.
13	The communication system of claim 12 wherein the first communication unit is a small cell base station.
14	The communication system of claim 1 wherein the first and second sets of collected data comprise RSSI measurements collected within the first and second networks.
15	The communication system of claim 14 wherein the at least one policy adjusts a transmission rate of at least one channel within the first network.
16	The communication system of claim 1 wherein the first and second sets of collected data comprise collected measurements related to SNR across a plurality of wireless channels within the first and second networks.
17	The communication system of claim 16 wherein the at least one policy adjusts a transmission power level across a first wireless channel within the plurality of wireless channels.
18	The communication system of claim 1 wherein two interfaces within the first, second and third interfaces are the same interface.
19[pre]	A method for managing a plurality of networks, the method comprising:

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19[a]	receiving, by a server, from network monitoring devices that monitor data associated with an operation of two or more communication units located in at least two networks within the plurality of networks, the data comprising a parameter;
19[b]	processing, by the server, the received data;
19[c]	based on the processed data, determining a policy for at least one of the two or more communication units; and
19[d]	in response to the server detecting a degradation of network performance in at least one network within the plurality of networks, communicating the policy to at least one or more communication units that implement one or more algorithms that use the parameter and at least one rule or one condition for the one or more communication units to improve a performance of the one or more communication units.
20	The method of claim 19 wherein determining the policy comprises selecting the policy from a set of policies that are stored on the one or more communication units and wherein the communicated policy updates the one or more algorithms implemented on the one or more communication units.
21	The method of claim 19 wherein the one or more communication units comprise a Wi-Fi access point.
22	The method of claim 19 wherein the one or more communication units comprise a cellular base station.
23	The method of claim 19 wherein the at least one rule or one condition comprises an adjustment to a wireless transmission band within the plurality of networks.