CLAIMS

1. A mobile radio communication network device operative to select at least one mobile radio communication device to perform Minimization of Drive Testing (MDT) measurements based on a Type of Allocation Code (TAC) information field of the mobile radio communication device, and to collect MDT measurement results from the mobile radio communication device.

2. A mobile radio communication device operative to perform Minimization of Drive Testing (MDT) measurements and to provide MDT measurement results to a mobile radio communication network device operative to select, based on a Type of Allocation Code (TAC) information field, at least one mobile radio communication device for MDT measurements, if the mobile radio communication device is selected as the mobile radio communication device for MDT measurements,

wherein information identifying whether the mobile radio communication device should perform MDT measurements or not is configured in the TAC information field of device identity information of the mobile radio communication device.

3. The mobile radio communication device according to Claim 2, operative to deactivate a capability to partake in MDT measurements.

4. A method of collecting measurement results, comprising:

selecting at least one mobile radio communication device to perform Minimization of Drive Testing (MDT) measurements based on a Type of Allocation Code (TAC) information field of the mobile radio communication device; and

collecting MDT measurement results from the mobile radio communication device.

5. A non-transitory computer readable medium that stores a computer program, the program comprising instructions for enabling a mobile radio communication network device to:

select at least one mobile radio communication device to perform Minimization of Drive Testing (MDT) measurements based on a Type of Allocation Code (TAC) information field of the mobile radio communication device; and

collect MDT measurement results from the mobile radio communication device.

6. A mobile radio communications system comprising:

a mobile radio communication device operative to perform Minimization of Drive Testing (MDT) measurements; and

a mobile radio communication network device operative to select, a Type of Allocation Code (TAC) information field, at least one mobile radio communication device for MDT measurements, and to collect MDT measurement results from the mobile radio communication device.

CLAIMS

[Claim 1]

A mobile radio communications network device operative to collect network performance measurements and to select at least one mobile radio communications device from which network performance measurements are to be collected if at least one parameter of the said at least one mobile radio communication device corresponds to at least one specified selection parameter, wherein said at least one specified selection parameter comprises data identifying at least one mobile radio communication device characteristic.

[Claim 2]

The network device according to Claim 1, wherein said at least one mobile radio communication device characteristic comprises an operational characteristic of said mobile radio communication device.

[Claim 3]

The network device according to Claim 2, wherein said mobile radio communication device operational characteristic is configured towards said mobile radio communication device.

[Claim 4]

The network device according to Claim 3, wherein the configuration is implemented by way of Open Mobile Alliance Device Management (OMA DM) signalling.

[Claim 5]

The network device according to any one of Claims 1 to 4, wherein said at least one mobile radio communication device characteristic comprises data identifying a mobile radio communication device type.

[Claim 6]

The network device according to Claim 5, wherein said data identifying a mobile radio communication device type is included in a Type of Allocation Code (TAC) information field of mobile equipment identity information.

[Claim 7]

The network device according to Claim 5 or 6, wherein said data identifying a mobile radio communication device type comprises data specifying that Machine-Type Communications (MTC) mobile radio communications devices are not to be included in acquisition of network performance measurements by said network device.

[Claim 8]

The network device according to any one of Claims 1 to 7, wherein said mobile radio communication device from which said network device should acquire network performance measurements is selected if each of a plurality of parameters of that mobile radio communication device has a corresponding specified selection parameter from a plurality of specified selection parameters.

[Claim 9]

The network device according to any one of Claims 1 to 8, wherein said network device is operative to retrieve from said at least one mobile radio communications device information indicative of at least one of: an access stratum (AS) capability of said mobile radio communication device; said at least one mobile radio communication device operational characteristic; and said mobile radio communication device type.

[Claim 10]

The network device according to Claim 9, wherein said device is operative to retrieve said information upon initial registration of said mobile radio communication device with said network device.

[Claim 11]

The network device according to Claim 9 or 10, wherein said device is operative to store obtained indicative information, further wherein said information is selectable to form at least a part of said selection parameters.

[Claim 12]

The network device according to any one of Claims 9 to 11, wherein said device is operative to transmit said stored obtained indicative information to a further network device in a UE mobility process.

[Claim 13]

The network device according to any one of Claims 1 to 12, comprising first and second operational elements, wherein said first operational element is operative to forward to said second operational element an instruction comprising said selection parameters, further wherein, responsive to receipt of said instruction, said second operational element invokes collection of network performance measurements from one or more mobile radio communication devices having parameters matching said selection parameters.

[Claim 14]

The network device according to Claim 13, wherein said instruction comprising said selection parameters comprises a trace session activation command.

[Claim 15]

The network device according to Claim 14, wherein information relating to each selection parameter comprises at least one flag in said trace session activation command.

[Claim 16]

The network device according to any one of Claims 2 and Claims 3 to 15, when directly or indirectly dependent upon Claim 2, wherein said operational characteristic of said mobile radio communication device relates to at least one of: mobility of said mobile radio communication device; call and/or data traffic of said mobile radio communication device; memory capacity of said mobile radio communication device; and battery life of said mobile radio communication device.

[Claim 17]

The network device according to Claim 16, wherein said mobile radio communication device selection does not take into account either user consent or a roaming characteristic of the device.

[Claim 18]

The network device according to any one of Claims 1 to 17, and arranged such that said network performance measurements are undertaken in a Minimization of Drive Testing (MDT) process.

[Claim 19]

A mobile radio communication device operative for radio configuration by said network device of any one of Claims 1 to 18.

[Claim 20]

The mobile radio communication device according to Claim 19, operative to deactivate a capability to partake in network performance measurements.

[Claim 21]

The mobile radio communication device according to Claim 19 or 20, operative to provide, to said mobile radio communication network device, information indicative of at least one of: an access stratum (AS) capability of said mobile radio communication device; said at least one mobile radio communication device operational characteristic; and said mobile radio communication device type.

[Claim 22]

The mobile radio communication device according to Claim 21, operative to set at least one device operational characteristic as information in a radio capability information module thereof.

[Claim 23]

A mobile radio communications device selection signal for network performance measurements, the signal comprising data identifying at least one mobile radio communication device characteristic.

[Claim 24]

The signal according to Claim 23, wherein said at least one mobile radio communication device characteristic comprises an operational characteristic of said mobile radio communication device.

[Claim 25]

The signal according to Claim 23 or 24, wherein said at least one mobile radio communication device characteristic comprises data identifying a mobile radio communication device type.

[Claim 26]

The signal according to Claim 24, wherein the mobile radio communication device type is included in a Type of Allocation Code (TAC) information field of mobile equipment identity information.

[Claim 27]

The signal according to any one of Claims 23 to 26, wherein said signal comprises an OMA DM signal.

[Claim 28]

A method of collecting network performance measurements, comprising:

selecting at least one mobile radio communications device from which network performance measurements are to be collected if at least one parameter of the said at least one mobile radio communication device corresponds to at least one specified selection parameter,

wherein said at least one specified selection parameter comprises data identifying at least one mobile radio communication device characteristic.

[Claim 29]

The method according to Claim 28, wherein said at least one mobile radio communication device characteristic comprises an operational characteristic of said mobile radio communication device.

[Claim 30]

The method according to Claim 29, wherein said mobile radio communication device operational characteristic is configured towards said mobile radio communication device.

[Claim 31]

The method according to Claim 30, wherein said configuration is implemented by way of OMA DM signalling.

[Claim 32]

The method according to any one of Claims 28 to 31, wherein said at least one mobile radio communication device characteristic comprises data identifying a mobile radio

communication device type.

[Claim 33]

The method according to Claim 32, wherein said mobile radio communication device type is included in a Type of Allocation Code (TAC) information field of mobile equipment identity information.

[Claim 34]

The method according to Claim 33, wherein mobile radio communication device selection does not take into account either user consent or a roaming characteristic of the device.

[Claim 35]

The method according to any one of Claims 32 to 34, wherein said data identifying a mobile radio communication device type comprises data specifying that Machine-Type Communications (MTC) mobile radio communications devices are not to be included in acquisition of network performance measurements by said network device.

[Claim 36]

The method according to any one of Claims 28 to 35, further comprising selecting a mobile radio communication device from which said network device should acquire network performance measurements if each of a plurality of parameters of that mobile radio communication device has a corresponding specified selection parameter from a plurality of specified selection parameters.

[Claim 37]

The method according to any one of Claims 28 to 36, further comprising retrieving, from said at least one mobile radio communications device, information indicative of at least one of: an access stratum (AS) capability of said mobile radio communication device; said at least one mobile radio communication device operational characteristic; and said mobile radio communication device type.

[Claim 38]

The method according to Claim 37, wherein said retrieving is implemented upon initial registration of said mobile radio communication device with said network device.

[Claim 39]

The method according to Claim 37 or 38, further comprising storing obtained indicative information, wherein said information is selectable to form at least a part of said selection parameters.

[Claim 40]

The method according to Claim 39, further comprising transferring the said stored obtained indicative information to a further network entity.

[Claim 41]

The method according to any one of Claims 28 to 40, further comprising forwarding, from a first operational element to a second operational element, an instruction comprising said selection parameters and, responsive to receipt of said instruction, collecting network performance measurements from one or more mobile radio communication devices having parameters matching said selection parameters.

[Claim 42]

The method according to Claim 41, wherein said instruction comprising said selection parameters comprises a trace session activation command.

[Claim 43]

The method according to Claim 42, wherein information relating to each selection parameter comprises at least one flag in said trace session activation command.

[Claim 44]

The method according to any one of Claims 29 and Claims 30 to 43, when directly or indirectly dependent upon Claim 29, wherein said at least one mobile radio communication device operational characteristic relates to at least one of: mobility of said mobile radio communication device; call and/or data traffic of said mobile radio communication device; memory capacity of said mobile radio communication device; and battery life of said mobile radio communication device.

[Claim 45]

The method according to any one of Claims 28 to 44, wherein said network performance measurements are undertaken in a Minimization of Drive Testing (MDT) process.

[Claim 46]

A method of configuring a mobile radio communication device using a network device operating using the method of any one of Claims 28 to 45.

[Claim 47]

The method according to Claim 46, further comprising said mobile radio communication device operating to deactivate a capability to partake in network performance measurements.

[Claim 48]

The method according to Claim 46 or 47, further comprising providing, from said mobile radio communication device to said mobile radio communication network device, information indicative of at least one of: an access stratum (AS) capability of said mobile radio communication device; said at least one mobile radio communication device operational characteristic; and said mobile radio communication device type.

[Claim 49]

The method according to Claim 48, further comprising setting said at least one device operational characteristic as information in a radio capability information module of said mobile radio communication device.

[Claim 50]

A non-transitory computer readable medium that stores a computer program, the program comprising instructions for enabling a mobile radio communication network device to carry out a method as claimed in any one of Claims 28 to 45.

[Claim 51]

A non-transitory computer readable medium that stores a computer program, the program comprising instructions for enabling a mobile radio communication device to carry out a method as claimed in any one of Claims 46 to 49.

[Claim 52]

A mobile radio communication network device including a computer program or computer readable medium, as claimed in Claim 50.

[Claim 53]

A mobile radio communication device including a computer program or computer readable medium, as claimed in Claim 51.

[Claim 54]

A mobile radio communications system comprising:

a mobile radio communications network device operative to collect network performance measurements and to select at least one mobile radio communications device from which network performance measurements are to be collected if at least one parameter of the said at least one mobile radio communication device corresponds to at least one specified selection parameter, wherein said at least one specified selection parameter comprises data identifying at least one mobile radio communication device characteristic; and

a mobile radio communication device operative for configuration by said network device.

[Claim 55]

The system according to Claim 54, wherein said at least one mobile radio communication device characteristic comprises an operational characteristic of said mobile radio communication device.

[Claim 56]

The system according to Claim 55, wherein said mobile radio communication device operational characteristic is configured towards the said mobile radio communication device.

[Claim 57]

The system according to Claim 54 or 55, wherein said at least one mobile radio communication device characteristic comprises data identifying a mobile radio communication device type.

[Claim 58]

type is conveyed in said TAC information field.

[Claim 71]

The system according to any one of Claims 55 and Claims 56 to 70, when directly or indirectly dependent upon Claim 55, wherein said at least one operational characteristic of said mobile radio communication device relates to at least one of: mobility of said mobile radio communication device; call and/or data traffic of said mobile radio communication device; memory capacity of said mobile radio communication device; and battery life of said mobile radio communication device.

[Claim 72]

The system according to any one of Claims 54 to 71, and arranged such that said network performance measurements are undertaken in a Minimization of Drive Testing (MDT) process.

[Claim 73]

The system according to any one of Claims 54 to 72, wherein said mobile radio communication device is operative to deactivate a capability to partake in network performance measurements.

[Claim 74]

The system according to any one of Claims 54 to 73, wherein said mobile radio communication device is operative to provide, to said mobile radio communication network device, information indicative of at least one of: an access stratum (AS) capability of said mobile radio communication device; said at least one mobile radio communication device operational characteristic; and said mobile radio communication device type.

[Claim 75]

The system according to Claim 74, wherein said mobile radio communication device is operative to set said at least one device operational characteristic as information in a radio capability information module thereof.