

6. The method (90) according to any preceding claim, wherein the first RAT is any of a 2nd generation, 2G, cellular communication RAT, a 3rd generation, 3G, cellular communication RAT, and a 4th generation, 4G, cellular communication RAT.

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7. The method (90) according to any preceding claim, wherein the second RAT is a 5th generation, 5G, cellular communication RAT.

8. A method for a cellular communication device (1) capable of communicating via a first radio-access technology, RAT, in a first frequency band (4), and via a second RAT in a second frequency band (7), which is in a higher frequency region than the first frequency band (4), of connecting to a cell of the second RAT, comprising:

performing the cell-search method (90) according to any preceding claim; and
if said second cell is detected:

15 registering (190) with the second cell.

9. A cellular communication device (1) capable of communicating via a first radio-access technology, RAT, in a first frequency band (4), and via a second RAT in a second frequency band (7), which is in a higher frequency region than the first frequency band, comprising:

20 a control unit (20) adapted to:

perform a first cell search in the first frequency band (4) in order to detect a first cell (2) of the first RAT; and

if such a first cell (2) is detected:

synchronize to the first cell (2), without registering to the first cell;

25 determine a reference frequency error estimate between a local reference frequency of the cellular communication device (1) and a reference frequency of the first cell (2); and thereafter

perform a second cell search, based on the reference frequency error estimate, in the second frequency band (7) to detect a second cell (5) of the second RAT.

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10. The cellular communication device (1) according to claim 109, wherein the control unit (20) is adapted to, in order to perform the second cell search, search a frequency grid of a set of hypothesized carrier frequencies, wherein the frequency location of said frequency grid is based on the ~~estimated~~ reference frequency error estimate.

11. The cellular communication device (1) according to claim 10, wherein the frequency location of said frequency grid is based also on the relative frequency location of the first frequency band (4) and the second frequency band (7).

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12. The cellular communication device (1) according to any of the claims 9-12, wherein the control unit is adapted to, if such a first cell (2) in the first frequency band (4) is not detected, perform a second cell search, based on a default reference frequency error estimate, in the second frequency band (7) to detect a second cell (5) of the second RAT.

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13. The cellular communication (1) device according to any of the claims 9-12, wherein the first frequency band (4) is located below 4 GHz and the second frequency band (7) is located above 10 GHz.

14. The cellular communication device (1) according to any of the claims 9-13, wherein the first RAT is any of a 2nd generation, 2G, cellular communication RAT, a 3rd generation, 3G, cellular communication RAT, and a 4th generation, 4G, cellular communication RAT.

15. The cellular communication device (1) according to any of the claims 9-14, wherein the second RAT is a 5th generation, 5G, cellular communication RAT.

16. The cellular communication device (1) according to any of the claims 9-15, wherein the control unit (20) is adapted to, if said second cell (2) is detected, register the cellular communication device (1) with the second cell (2).

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17. A computer program product comprising computer program code for executing the method according to any of the claims 1-8 when said computer program code is executed by a programmable control unit (20) of the cellular communication device (1).

18. A computer readable medium (300) having stored thereon a computer program product comprising computer program code for executing the method according to any of the claims 1-8 when said computer program code is executed by a programmable control unit (20) of the cellular communication device.