

## CLAIMS

1. Random Access, RA, method, comprising:
  - transmitting, by at least one of a plurality of terminal devices, a resource request with one or more preambles to a base station during one RA time slot,
  - detecting, by the base station, a priority level of the at least one resource request based on the number of preambles in the at least one resource request, and
  - assigning, by the base station, uplink resources according to the at least one resource request and the at least one priority level.
2. RA method according to claim 1, further comprising:
  - combining, by a terminal device, more preambles for transmitting a resource request having a higher priority level or fewer preambles for transmitting a resource request having a lower priority level.
3. RA method according to claim 1 or 2, further comprising:
  - providing, by a terminal device transmitting a resource request with more than one preamble, a determined time and/or frequency shift between the preambles,
  - wherein in case the determined time and/or frequency shift is zero, the preambles are provided with different signatures.
4. RA method according to one of the claims 1 to 3, further comprising:
  - arranging, by a terminal device transmitting a resource request with more than one preamble, the preambles with at least a partial overlap in the time and/or frequency domain.
5. RA method according to one of the claims 1 to 4, further comprising:
  - determining, by at least one terminal device, a number of preambles for transmitting a resource request with a determined priority level, and/or
  - determining, by the at least one terminal device, a time and/or frequency shift between the number of preambles.
6. RA method according to one of the claims 1 to 5, further comprising:
  - broadcasting, by the base station to the plurality of terminal devices, a determined time and/or frequency shift to be set between preambles of a resource request.

7. RA method according to claim 5, further comprising:  
transmitting, by the at least one terminal device, the number of preambles and/or the time and/or frequency shift to the base station.
8. RA method according to one of the claims 5 to 7, wherein the time and/or frequency shift is predetermined or is determined based on a current network load and/or on available radio resources.
9. RA method according to one of the claims 1 to 8, further comprising:  
broadcasting, by the base station to the plurality of terminal devices, mapping information between numbers of preambles and priority levels of resource requests.
10. RA method according to one of the claims 1 to 9, further comprising:  
detecting, by the base station, a time and/or frequency shift between at least two received preambles, and  
determining, whether the at least two received preambles are from the same terminal device or from different terminal devices based on the detected time and/or frequency shift and/or received power levels of preambles.
11. RA method according to claim 10, wherein the detecting of the time and/or frequency shift between the at least two received preambles comprises:  
measuring, by the base station, the time and/or frequency shift between detected correlation peaks of the received preambles.
12. A computer program product comprising a program code for performing a Random Access, RA, method of any of the claims 1 to 11 when executed on a computer.
13. Base station, comprising:  
a receiving unit configured to receive from at least one of a plurality of terminal devices a resource request with one or more preambles during one Random Access, RA, time slot,  
a detecting unit configured to detect a priority level of the at least one resource request based on the number of preambles in the at least one resource request, and

an assignment unit configured to assign uplink resources according to the at least one resource request and the at least one priority level.

14. Terminal device, comprising:

a transmitting unit configured to transmit a resource request with one or more preambles to a base station during one Random Access, RA, time slot, and configured to combine more preambles for transmitting a resource request having a higher priority level and fewer preambles for transmitting a resource request having a lower priority level.

15. System comprising a base station and a plurality of terminal devices,

wherein the system is configured to perform a Random Access, RA, method according to one of the claims 1 to 11, and/or

wherein the base station is a base station according to claim 13 and the terminal device is a terminal device according to claim 14.