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Declarations under Rule 4.17:

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

[Continued on next page]

(54) Title: RADIO ACCESS NETWORK (RAN) LEVEL KEEP ALIVE SIGNALING

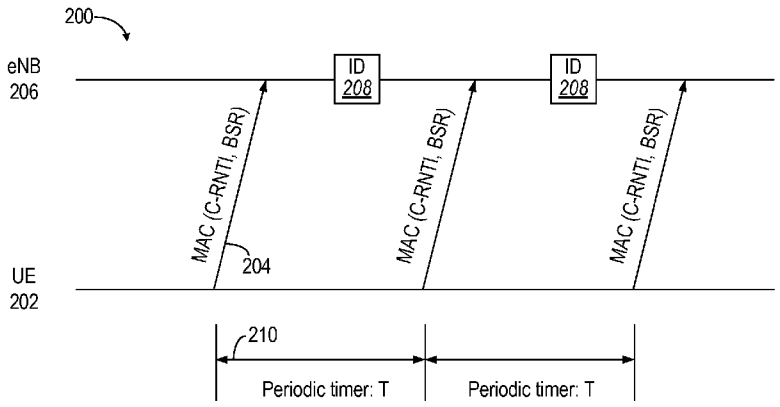


FIG. 2

(57) Abstract: In a wireless communication system, a mobile station performs 'keep-alive' signaling with a serving radio access network (RAN), transmitting its identity without necessarily an accompanying data portion. The serving RAN does not necessarily acknowledge. Thereby, the mobile station maintains state synchronization with the serving RAN, which also benefits in being able to timely release a context when the 'keep-alive' transmission is not continued. In one aspect, the mobile station utilizes random access procedures (RACH) for uplink data arrival with a 0-byte MAC buffer status report whose identifying Cell Radio Network Temporary Identity (C-RNTI) can be used by the serving RAN for keep alive purposes. In another aspect, the mobile station can perform non-access stratum (NAS) signaling containing identification for the mobile station that is supported by underlying access stratum (AS) signaling via the serving RAN. This identifying NAS signaling is detected or a downstream recipient alerts the serving RAN.

WO 2009/097602 A1

— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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