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

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(54) **Title**: SUCCESSIVE DETECTION AND CANCELLATION FOR CELL PILOT DETECTION

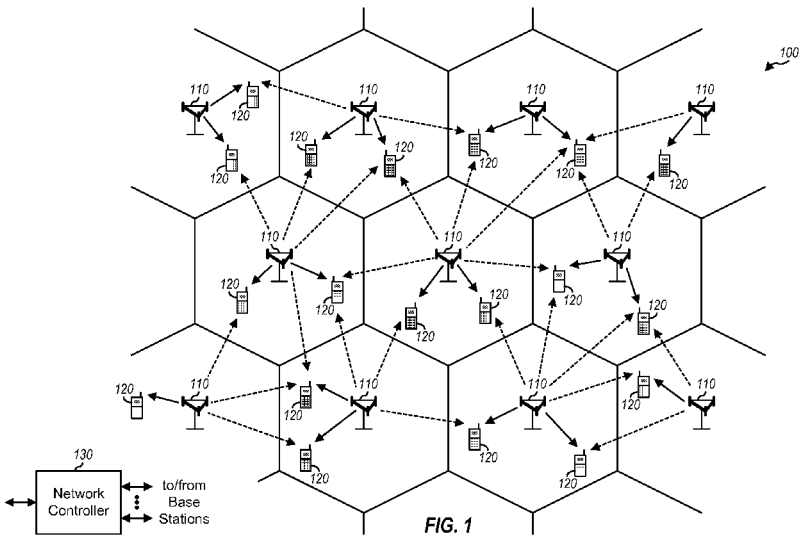


FIG. 1

(57) **Abstract**: Techniques for performing cell detection with successive detection and cancellation (SDC) are described. For SDC, pilots from stronger cells may be canceled from a received signal at a user equipment (UE) so that weaker cells may be detected as a result of reduced interference from the stronger cells. In one design, a UE processes a received signal to detect for a cell and determines whether the detected cell is sufficiently strong. If the cell is sufficiently strong, then the UE cancels the interference due to the detected cell from the received signal and further processes an interference-canceled signal to detect for another cell. The UE may detect for cells in a set of cells in a sequential order, from the strongest cell to the weakest cell. The UE may terminate detection when a cell not sufficiently strong is detected or when all cells in the set are detected.

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