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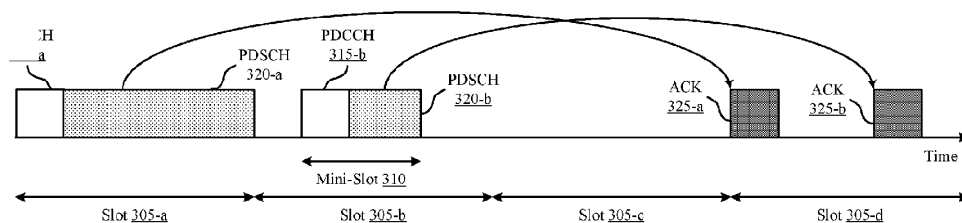


FIG. 3

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(57) Abstract: Methods, systems, and devices for wireless communications are described that provide for unambiguous mapping between downlink control channel transmissions, downlink shared channel transmissions, and uplink acknowledgment feedback resources. The uplink acknowledgment feedback resource may be located within a same transmission time interval (TTI). A base station may configure codebook-based acknowledgment resources from a user equipment (UE), and feedback delay values may be associated with time domain resources of the downlink shared channel transmissions. In some examples, feedback delay values may be associated with particular search spaces or monitoring occasions of the downlink control channel transmissions that include resource allocations for the downlink shared channel transmissions. A UE using codebook-based acknowledgment feedback resources may thus unambiguously identify uplink resources that are to be used for transmitting the uplink acknowledgment feedback.

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