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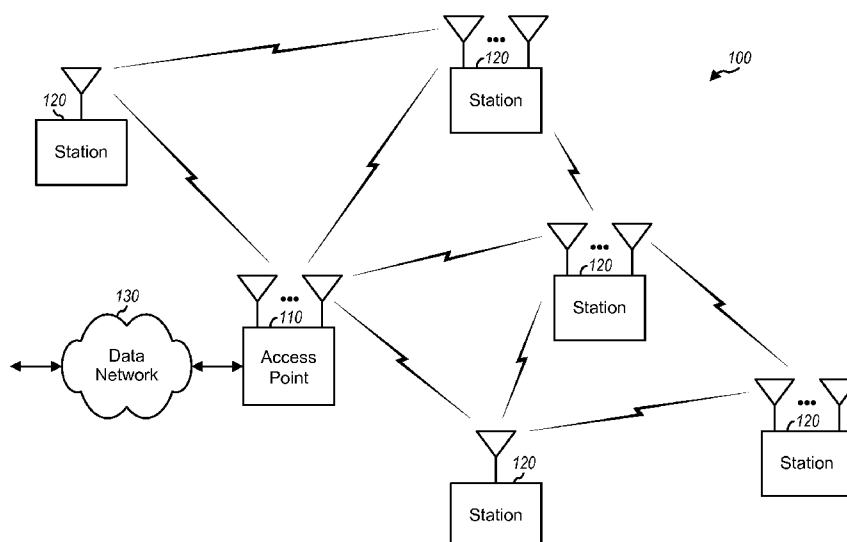
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- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

[Continued on next page]

(54) Title: METHOD AND SYSTEM FOR PROVIDING BEAMFORMING FEEDBACK IN WIRELESS COMMUNICATION SYSTEMS



(57) Abstract: Techniques to support beamforming for stations in a wireless network are described. In one aspect, a station may support beamforming with implicit feedback or explicit feedback by having capabilities to transmit and receive sounding frames, respond to training request by sending a sounding frame, and respond to request for explicit feedback. In one design of explicit beamforming, the station may send a first frame with a request for explicit feedback and may also send a Null Data Packet (NDP) having at least one training field but no data field. The station may receive a second frame with the explicit feedback, which may be derived based on the NDP. The station may derive steering information (e.g., steering matrices) based on the explicit feedback and may then send a steered frame with beamforming based on the steering information. The station may also perform implicit beamforming using NDP for sounding.

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