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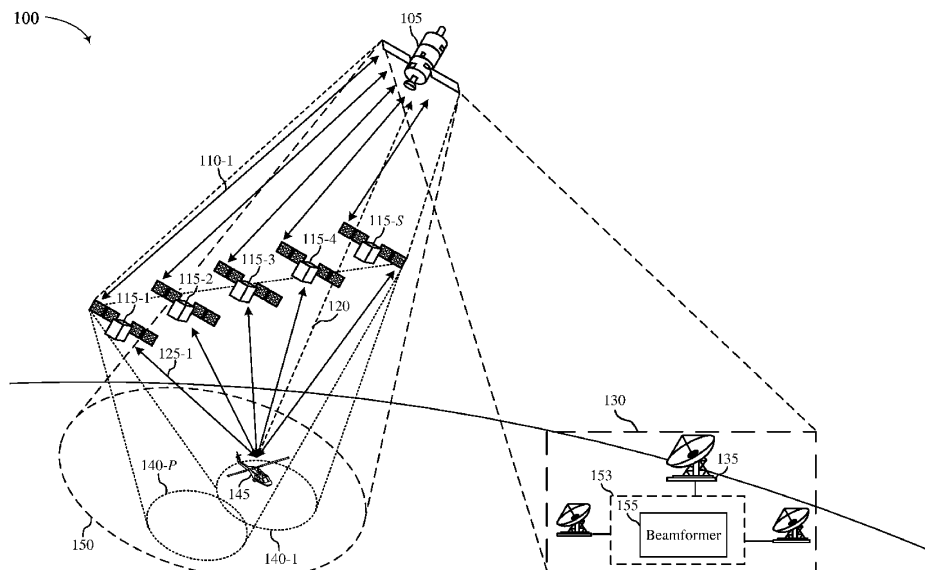


FIG. 1A

(57) Abstract: Methods, systems, and devices for communication operations are described. A first satellite may be in a first orbit, and a set of second satellites may be in second orbits that are lower than the first orbit. The second satellites may detect signal components of a signal originating from a geographic area and relay the respective signal components to the first satellite. A beamformer coupled with the first satellite may form a beam associated with the geographic area. The beamformer may also obtain a beam signal based on the respective signal components and a return channel, where the return channel includes at least a channel component between the geographic area and the set of second satellites.

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