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- (71) **Applicant: MATSING, INC.** [US/US]; 12 Mauchly, Unit O, Irvine, California 92618 (US).
- (72) **Inventors: MATITSINE, Serguei**; 2619 McKinney Avenue, #1602, Dallas, Texas 75204 (US). **MATYTSINE, Leonid**; 5 Franklin, Irvine, California 92620 (US). **WILSON, John Stewart**; 1106 Huntington Street, Huntington Beach, California 92648 (US).
- (74) **Agent: FISH, Robert D.** et al.; FISH IP LAW, LLP, 19900 MacArthur Blvd., Suite 810, Irvine, California 92612 (US).
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(54) **Title:** HIGH SINR SYNCHRONIZED-BEAMS MOBILE NETWORK AND BASE-STATION ANTENNA DESIGN

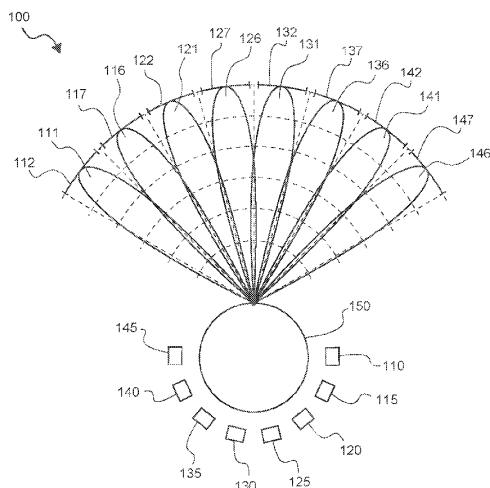


FIG. 1A

(57) **Abstract:** A multi-beam communication system uses an array of antenna assemblies, and RF elements, to provide two or more sets of multiple beams, where each individual set of beams can be considered a beam state. An antenna assembly has a first set of RF elements oriented to produce a first beam state, and a second set of RF elements oriented to produce a second beam state. Each set of RF elements comprise a set of output sectors, where a controller is configured to selectively activate a beam state.

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