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(54) Title: A SYSTEM AND METHOD OF DETECTING A DIRECTION OF ARRIVAL OF ONE OR MORE TARGET SIGNALS USING AN ANTENNA ARRAY

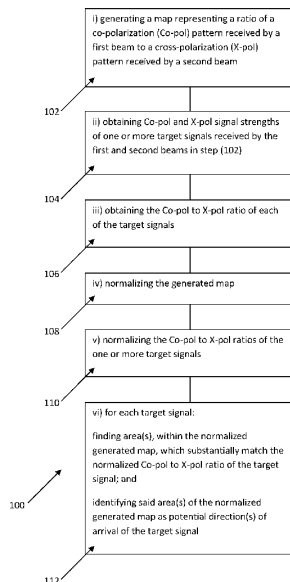


FIG. 1

(57) Abstract: There is provided a system and method of detecting a direction of arrival of one or more target signals using an antenna array, the method comprising, i) generating a map representing a ratio of a co-polarization (Co-pol) pattern received by the first beam to a cross-polarization (X-pol) pattern received by the second beam; ii) obtaining Co-pol and X-pol signal strengths of the one or more target signals received by the first and second beams in step (i); iii) obtaining the Co-pol to X-pol ratio of each of the one or more target signals; iv) normalizing the generated map; v) normalizing the Co-pol to X-pol ratios of the one or more target signals; and vi) for each target signal: finding area(s), within the normalized generated map, which substantially match the normalized Co-pol to X-pol ratio of the target signal; and identifying said area(s) of the normalized generated map as potential direction(s) of arrival of the target signal.

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