

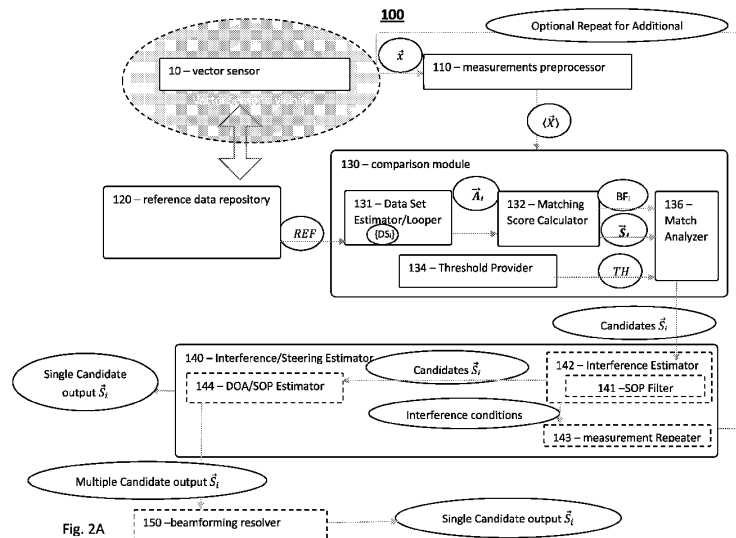
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(54) Title: SYSTEM AND METHOD FOR CHARACTERIZING PROPERTIES OF EM SIGNALS



(57) **Abstract:** A method and system are presented for determining properties of an electromagnetic waveform. The method comprises: providing measured parametric EM field data indicative of measured vector components of electric and magnetic fields of an EM waveform measured in at least one instance of time; providing reference data indicative of a plurality of reference data sets, each data set comprising: a reference steering vector parameters indicative of a certain respective direction of arrival (DOA), and a corresponding parametric EM field reference data including reference vector components of an electric and magnetic field pertaining to a wavefront propagating with the DOA of the corresponding reference steering vector parameters; determining a matching score between the measured parametric EM field data and the parametric EM field reference data of one or more of the reference data sets; and in case the matching score of a certain reference data set complies with a certain threshold condition, determining that said measured parametric

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EM field data corresponds to said EM waveform having a single EM wavefront thereby enabling to discriminate between measured EM waveforms having a single wavefront and measured EM waveforms having multiple wavefronts.