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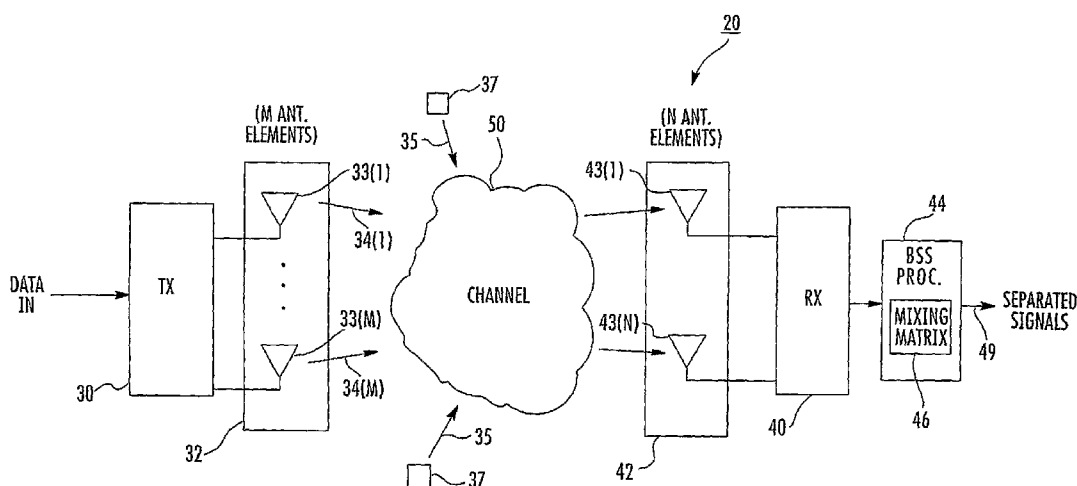
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(54) Title: PATTERN DIVERSITY TO SUPPORT A MIMO RECEIVER AND ASSOCIATED METHODS



(57) Abstract: A MIMO communications system includes a transmitter, and a transmit antenna array connected to the transmitter and having M antenna elements for transmitting M source signals. A receive antenna array is connected to a receiver and has N antenna elements for receiving at least M different summations of the M source signals, with N being less than M. A signal separation processor is connected to the receiver for forming a mixing matrix that includes the at least M different summations of the M source signals so that the mixing matrix has a rank equal to at least M. The signal separation processor separates desired source signals from the mixing matrix.