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Yitzchak Hanassi Blvd., P.O.B. 330, 77102 Ashdod (IL).(72) Inventors: **WEISBART, Shmuel**; 69 Levi Eshkol St.,
6936154 Tel Aviv (IL). **TABRIKIAN, Joseph**; Kehilat
Venezia 1B, 69400 Tel Aviv (IL). **WULICH, Dov**; 30
Kovshim, 85025 Metar (IL).(74) Agent: **REINHOLD COHN AND PARTNERS**; P.O.
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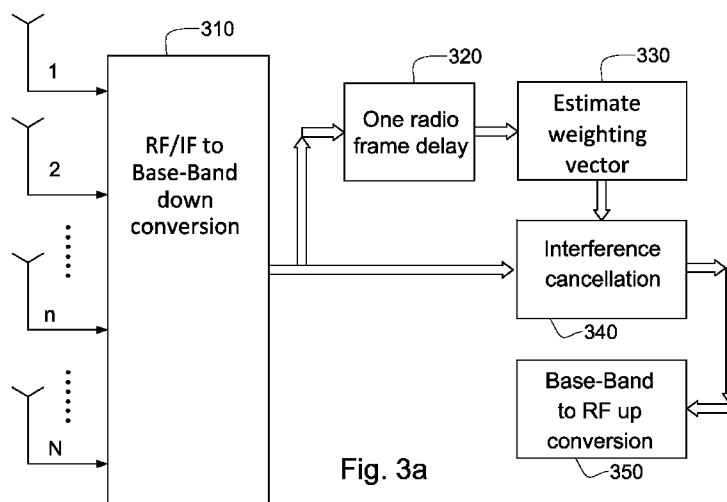
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**Fig. 3a**

(57) Abstract: A system for cancelling interference in a wireless network, the system comprising apparatus for computing and outputting at least N weighting vectors; and apparatus for cancelling interference from antennae outputs received by the system using the weighting vectors respectively by converting the weighting vectors into FIR filter coefficients and applying FIR filters corresponding to the FIR filter coefficients to derivatives of antennae outputs received by the system. The apparatus for computing and outputting weighting vectors may be operative by estimating a spatial signature while distinguishing interference spatial signature from desired signal spatial signature although both are received simultaneously.