CLAIMS

1. System for determining a direction of arrival of a radio signal comprising at least three antennas,

- means configured for determining at least two phase shifts, associated with various antenna pairs respectively, said phase shifts being the difference between a phase of the signal received from one of the antennas of a pair and a phase of the signal received from the other antenna of the pair,

said system being characterized in that it also comprises:

- means configured for calculating a phase shift between one of the antennas and a virtual antenna by summing at least two of the phase shifts;
- first means configured for determining a set of parameters respectively associated with a supposed direction of arrival, ~~based on said summation,~~ by calculating the difference between said phase shift between one of the antennas and a virtual antenna, ~~said summation~~ and a reference ~~summation~~ phase shift associated with the supposed direction of arrival; and
- second means configured for determining the direction of arrival as being the supposed direction of arrival associated with the parameter having the minimum value.

2. System according to Claim 1, in which the antennas are distributed in a line.

3. System according to Claim 1, in which the antennas are evenly distributed in a circle.

4. System according to any of Claims 1 to 3, comprising at least four antennas and in which said means configured for determining at least two

phase shifts are configured for determining phase shifts associated with various antenna pairs having one antenna in common.

5. Method for determining a direction of arrival of a radio signal comprising

- a step of determining at least two phase shifts, associated with various antenna pairs respectively, said phase shifts being the difference between a phase of the signal received from one of the antennas of a pair and a phase of the signal received from the other antenna of the pair;

said method being characterized in that it also comprises:

- a step of calculation of a phase shift between one of the antennas and a virtual antenna by summing at least two of the phase shifts;
- a first step of determining a set of parameters respectively associated with a supposed direction of arrival, ~~based on said summation,~~ by calculating the difference between said phase shift between one of the antennas and a virtual antenna, ~~summation~~ and a reference ~~summation~~ phase shift associated with the supposed direction of arrival; and
- a second step of determining the direction of arrival as being the supposed direction of arrival associated with the parameter having the minimum value.