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Radio-telemetry is an excellent tool for gathering data on the biology of freely moving animals. Transmitters small enough to fit on the backs of birds or be clipped onto small animals are being heavily used by scientists to identify behavioral patterns of animals. Directional antennas are commonly used in tracking freely moving animals with tags. Physical limitations of antennas and different environmental conditions interfere the receivers and may deviate recordings received from the signal transmitter. In addition, with intermittent radio signaling, one can not expect that all receivers are positioned in a location to receive the same signal at the time it is being transmitted. Contrary to the mathematical models that estimate the location of free-ranging animals using the reception of transmitted signal by all receivers our method can also be applied in absence of some receivers. The main methodology we utilized in our model is Monte Carlo methods in conjunction behavioral patterns of wildlife in order to improve estimates. The model will continually update its predictions using the available measurements. Simulation experiments are carried out to show the effectiveness of these filters in locating animals with tracking devices. (Received September 15, 2008)