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**Perruzzi et al.**

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(54) **METHOD AND SYSTEM FOR DETERMINING THE PROBABLE LOCATION OF A CONTACT**

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(58) **Field of Search** ..... **89/41.01, 1.11; 342/67, 62; 702/152; 244/3.1, 3.15**

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(57) **ABSTRACT**

The present invention relates to a method and a system for determining a weapon firing strategy for an evading target. The method of the present invention comprises the steps of sensing the motion of the target, analyzing the motion of the target, providing a weapon employment decision aid, determining the evasion region for the target using the weapon employment decision aid and the analyzed motion, visually displaying the evasion region, feeding operator knowledge about the evading target, and generating a representation of the probability of the location of the evading target. The weapon employment decision aid utilizes beta density functions to determine the evasion region. The weapon employment decision aid displays target course and speed in the form of bar graphs and allows the operator to input information about target evasion course and speed and uncertainty levels.

**17 Claims, 5 Drawing Sheets**

