

Title (en)
Improvements in and relating to precision targeting.

Title (de)
Verbesserungen in Bezug auf genaues Zielen.

Title (fr)
Améliorations concernant le ciblage de précision.

Publication
EP 0583972 A1 19940223 (EN)

Application
EP 93306477 A 19930817

Priority
US 93107892 A 19920817

Abstract (en)
An aircraft (1) with a SAR images a target area (5) and selects a target in the target area from a known first position (P1) whereat the GPS coordinates of the position are determined and from which the range and monopulse angles of the target are computed to establish the location of the target in three dimensions with associated errors. The aircraft then flies to a second position (P2) whereat the GPS coordinates of the second position are determined and obtains another high resolution image of the target. Again, the range and monopulse angles of the target are computed. Because of the accuracy of the GPS-aided INS, computer aiding to the pilot will make this second designation much easier. Since the position vector between the two known positions can be provided with accuracy to within a few inches due to the accuracy of the GPS receiver with carrier phase tracking, the position of the target is determined largely by the range measurement accuracy of the radar and the two position locations. Since this establishes the location of the target in a GPS coordinate system relative to the position of the aircraft, absolute position errors typically associated with GPS navigation are canceled. The GPS guided weapon, when supplied with the target location in GPS coordinates, is then guided to the target with the high precision available in clear weather conditions. Since the radar and GPS are both fully functional in adverse weather as well as clear weather, there is provided an all-weather solution to precision weapon delivery. <IMAGE>

IPC 1-7
F41G 7/36; **F41G 7/00**

IPC 8 full level
F41G 7/00 (2006.01); **F41G 7/36** (2006.01)

CPC (source: EP)
F41G 7/007 (2013.01); **F41G 7/346** (2013.01); **F41G 7/36** (2013.01)

Citation (search report)
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