Abstract

Seeking in a field of view (FOV) is influenced by the existence of jammers, noise, shine background or flying perturbations. All these factors may push the target out of the FOV and cause missing the target. In all the seekers the FOV is not fully exploited which means the target can be missed before becoming out of the FOV, this results of the nonlinearity of the reticle structure. In this paper, a novel method of the target position detection a crossed four slits or crossed array detectors (CAT) seeker will be designed, simulated and evaluated. The idea of this method depends on dividing the FOV into main regions up to a certain parameter, which is the pulses number; then, each main region will be divided into sub-regions up to a second parameter which will be the pulses distribution a spin period. The errors sources will be discussed and evaluated. Other new idea will be applied which is exploiting some area of the
FOV where a part of the position data is missed in the information signal by pushing the target to the region where the information signal carries the total position data.

References

- M. R. Mosavi, M. Asadpour, and H. A. Amerim, Design and Simulation of an

Index Terms

   Computer Science
   Signal Processing

Keywords

   Infrared Seeker  Target Position Detection  Crossed Array Detectors (CAT)  Field of view (FOV)