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**Title** Seeker Filter and Fusion for Maneuvering Target using IMM

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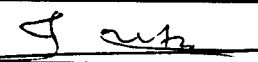
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**Sponsor** DRDL, Hyderabad

**Approval** Head, FMCD  Group Leader 

**Remarks**

**Keywords** Seeker Filter, Fusion, Glint Modelling, RCS fluctuation, Maneuvering Target, Interacting Multiple Model.

**Abstract** This project proposal is aimed at developing a seeker filter to track the air breathing target (ABT) using interacting multiple model (IMM) Kalman filter in the presence of seeker noise and glint noise. The proposed seeker filter incorporates identified maneuver models, glint noise model, seeker noise model with eclipsing and RCS fluctuation effect for estimating the following with minimum time lag and high attenuation of noise:

- i. LOS angles and rates
- ii. Target acceleration
- iii. Range and range rate
- iv. Closing Velocity
- v. Gimbal Angles