Miniature Radar System for UAV-Based Air to Air Identification

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Summary: Radar-based detection and identification for miniature air vehicles

Description: A lightweight radar system for use on a small-scale aircraft, namely a miniature unmanned aerial vehicle (UAV). Compared to UAVs used by the military, civilian UAVs are often operated by pilots without formal training, and hence they require increased levels of autonomy and intelligence, especially with regard to reducing threats to public safety. This radar implementation is small enough to be carried by any miniature UAV, and it is capable of differentiating other miniature rotorcraft by their Doppler signature. This invention will be a key component to future miniature UAVs.

Advantages of this Invention: Radar system on a small UAV to be operated by individuals or small teams with little formal training
- Effective collision mitigation system
- Miniature system that can perform both target detection and identification on other miniature UAVs

Potential Areas of Application: Military and non-military applications
- Traffic monitoring, fire protection, border patrol
- Other miniature UAV applications for civilian use

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