## SmartUAV: A Novel UAV Hub Assisted Alternative PNT System With Application to Tactical Edge

## Positioning, Navigation, and Timing (PNT) for reliable and high-accuracy localization at the tactical edge

Most existing PNT services, either highly relying on GPS or lack accuracy due in complex environments. *SmartUAV* is different from existing PNT algorithms. It learns the optimal PNT services in real-time using a new type of PNT state-space model to dynamically describe the quality of real-time PNT services.



- Novel open architecture that integrates alternative PNT signals.
- UAV-assisted multi-perception system that strengthens the flexibility and reliability of PNT services by adapting to complex environments.
- Hybrid learning based PNT data processing technique optimizes the PNT service in real-time.

