

Title: Multi-base station communication

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What is a multi-base station cooperative approach?

In contrast, our multi-base station cooperative approach achieves distributed sensing with real-time fusion capabilities, enabling comprehensive coverage and rapid response times suitable for dynamic aerial surveillance scenarios. Table 2. Technical comparison of different sensing approaches.

Can integrated sensing & communication (ISAC) base stations be used for collaborative sensing?

Abstract: The collaborative sensing of multiple Integrated sensing and communication (ISAC) base stations is one of the important technologies to achieve intelligent transportation. Interference elimination between ISAC base stations is the prerequisite for realizing collaborative sensing.

How does a base station work?

Each base station operates with integrated sensing and communication functionalities, enhancing the overall system's capability to detect small and fast-moving objects, including UAVs. The following Table 5 summarizes the key parameters used in the experiments.

Why should a unified network include multiple base stations?

By incorporating multiple base stations into a unified network, the system can achieve a much higher level of detection accuracy and coverage, as base stations share and process data collaboratively. 3.2. Fusion of Data and Signals from Multiple ISAC BSs

Integrated sensing and communication (ISAC) exhibits notable potential for sensing the unmanned aerial vehicles (UAVs), facilitating real-time monitoring of UAV

In this paper, we investigate a cooperative multi-BS ISAC system with multi-target and multi-user. In particular, communication and sensing are performed by multiple BSs with a ...

The communication mutual interference between multiple BSs: When multiple BSs provide communication services to the UEs in the same area, the UEs will receive multiple downlink ...

In this paper, we investigate a cooperative multi-BS ISAC system with multi-target and multi-user. In particular, communication and ...

With the sensing limitation of single base station (BS), multi-BS cooperative sensing is regarded as a promising solution. The coexistence and overlapped coverage of macro BS (MBS) and ...

We propose a soft map fusion strategy based on range-angle maps obtained at each BS. We present an AI-based approach to infer the target category that is then exploited by an adaptive ...

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