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Base station mixed power and communication signals

Overview

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.

What is a multi-functional base station?

Specifically, a multi-functional base station (BS) can enable multi-functional transmissions by exploiting the same radio signals to perform target/environment sensing, wireless communication, and wireless power transfer (WPT) simultaneously.

Can multiple Isac base stations communicate and radar sense simultaneously?

Interference elimination between ISAC base stations is the prerequisite for realizing collaborative sensing. In this paper, we focus on the mutual interference elimination problem in collaborative sensing of multiple ISAC base stations that can communicate and radar sense simultaneously by transmitting ISAC signals.

What is a joint design of base station transmit beamforming & Ris phase shift matrix?

A joint design of the base station transmit beamforming and RIS phase shift matrix is proposed to minimize total interference and maximize the worst received signal power at the RIS sensors.

Base station mixed power and communication signals

A Power Control and Intervention Algorithm for Co-Existing IMT Base

To control the interference, a partition-based power control algorithm is proposed, which divides ground base stations into multiple areas and virtualizes each area's base ...

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Integrated Sensing, Communication, and Powering: Toward ...

Specifically, a multi-functional base station (BS) can enable multi-functional transmissions by exploiting the same radio signals to perform target/environment sensing, ...

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Integrated Sensing and Communication enabled ...

Driven by the intelligent applications of sixth-generation (6G) mobile communication systems such as smart city and au-tonomous driving, which connect the ...

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A Power Control and Intervention Algorithm ...

To control the interference, a partition-based power control algorithm is proposed, which divides ground base stations into multiple areas and virtualizes each area's base stations into a

single large base station ...

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Toward Multiple Integrated Sensing and Communication Base Station

The collaborative sensing of multiple Integrated sensing and communication (ISAC) base stations is one of the important technologies to achieve intelligent transportation. ...

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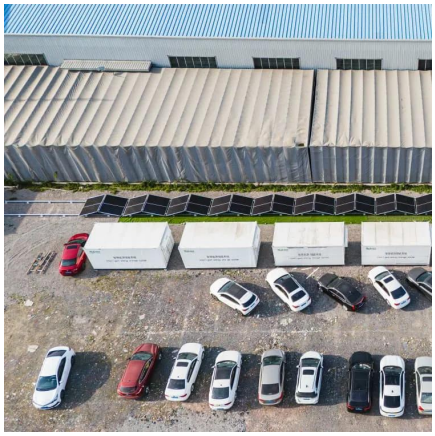

Toward Multiple Integrated Sensing and Communication ...

I. INTRODUCTION Integrated sensing and communication (ISAC) base stations are gradually becoming one of the important devices for intelligent transportation [1], which can ...

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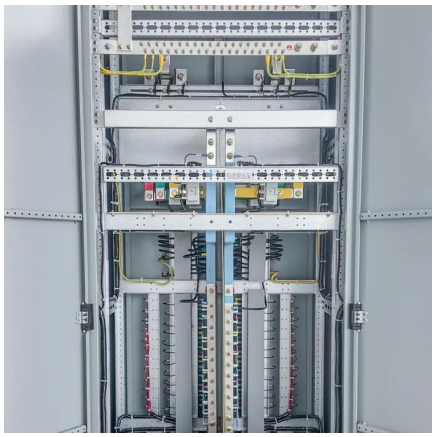

RIS-aided integrated sensing and communication: ...

This work considers an integrated sensing and communication system, where a reconfigurable intelligent surface (RIS) is utilized to manage interference and radar signals. ...

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Multiuser Communications with Movable-Antenna Base ...

Abstract--Movable antenna (MA) is an emerging technol-ogy which enables a local movement of the antenna in the transmitter/receiver region for improving the channel ...

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Integrated Sensing and Communication enabled Multiple

Driven by the intelligent applications of sixth-generation (6G) mobile communication systems such as smart city and autonomous driving, which connect the ...

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Communication-centric integrated sensing and ...

The average SINR of communication only systems remains flat as the sensing SCNR constraint increases, because they are not affected by the sensing target. The systems ...

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Toward Multiple Integrated Sensing and Communication Base Station

This paper focuses on two optimization problems: a) Transmit power minimization at the base station (BS) while guaranteeing the receive signal-to-interference-plus-noise ratio ...

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