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# Micro base station communication principle

How can a millimeter-wave base station improve real-time information transmission?

Finally, the proposed metasurfaces help the millimeter-wave base station to realize real-time information transmission of multi-users with different directions in a realistic indoor scenario. The experimental results demonstrate that the new beamforming base station system can intelligently enhance or attenuate signals in specific target areas.

Can a programmable metasurface build a smart base station framework for 6G?

Here, we propose a large-scale 2-bit millimeter-wave programmable metasurface to build an integrated smart base station framework for 6G communications. The meta-array is composed of  $30 \times 30$  meta-elements, each with two embedded positive-intrinsic-negative (PIN) diodes.

How a beamforming system enables smart communication of new types of base stations?

The independent and reconfigurable capabilities in manipulating the propagation directions of four streams have facilitated the smart communication of the new types of base stations. We summarize the properties of the proposed beamforming system in Table 1.

Do micro base stations supplement signal blind spots?

This paper concludes that in the case of large-scale coverage of macro base stations, micro base stations supplement signal blind spots. Finally, the work gives forward suggestions for the construction and innovative development of relevant base stations globally. ITU Radio Regulations, Section IV.

Base stations are the core of mobile communication, and with the rise of 5G, thermal and energy challenges are increasing. This article explains the definition, structure, ...

Abstract--Addressing the communication and sensing demands of sixth-generation (6G) mobile communication system, integrated sensing and communication (ISAC) ...

Abstract--In this paper, a dual polarization multilayer patch micro base station antenna based on a differential feed structure is proposed. The antenna is designed with a ...

The construction of the 5G network in the communication system can potentially change future life and is one of the most cutting-edge engineering fields today. The 5G base ...

At present, the networking mode of base station is based on macro base stations and micro base stations as a supplement [7, 8]. Before 3G, communication services were ...

In this paper, we propose a  $30 \times 30$  2-bit millimeter-wave programmable metasurface system for base station application with precise and wide 2D beamforming ...

Here, we propose a large-scale 2-bit millimeter-wave programmable metasurface to build an integrated smart base station framework for 6G communications. The meta-array is ...

With the increasing density of base stations, the network energy consumption is increasing and has become one of the important reasons for the excessive greenhouse gas ...

Network operators have taken proactive steps to address these difficulties by gradually adopting the deployment of micro base stations (uBS). Integrating these uBS ...

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This article will introduce LTE network application issues based on micro base stations, analyze the principles and advantages of micro base stations, and formulate ...

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