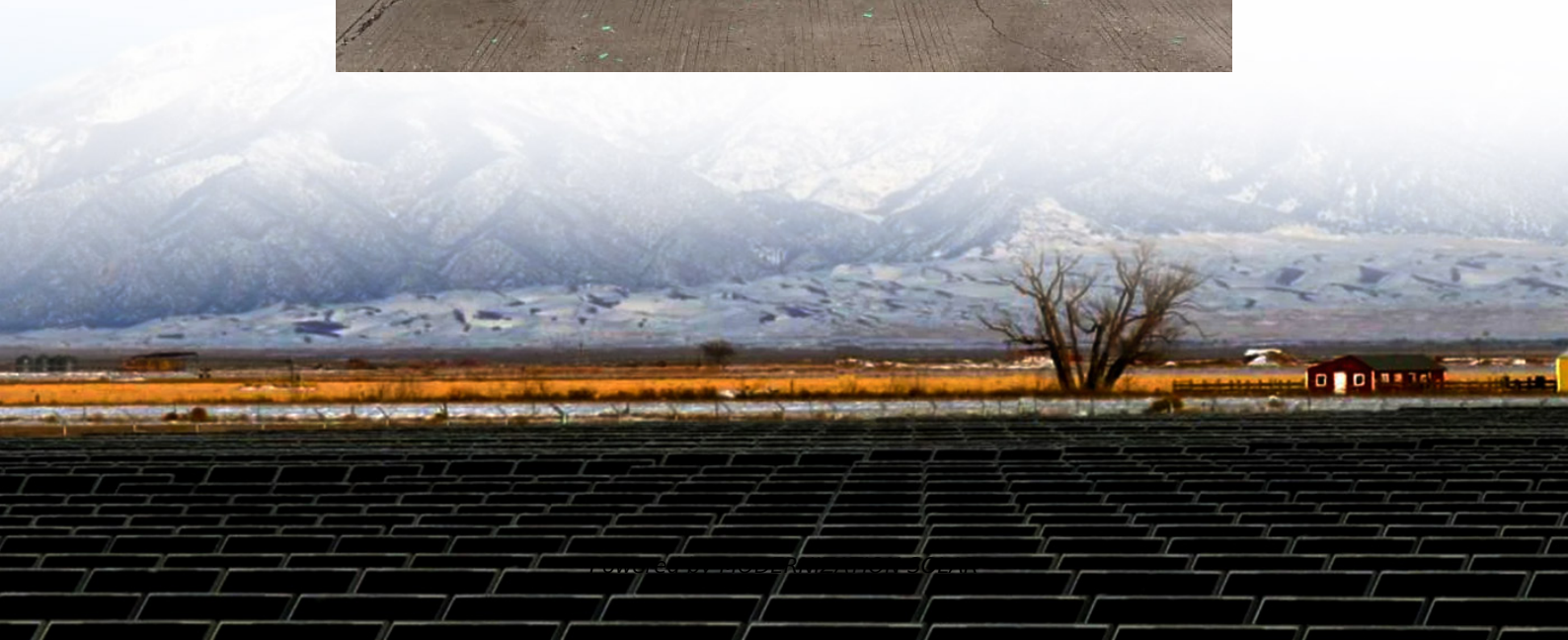


Millimeter wave base station communication distance





Overview

1) The coverage range for a single base station is roughly around 100m for a typical link budget, with the covered area having more than a few strong channel taps. 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.

How do millimeter-wave mobile communication systems ensure fast initial access and beam tracking?

In general, fast initial access and beam tracking are ensured by allocating a large number of time-frequency resources to the user equipment in millimeter-wave mobile communication systems 3.

What is the maximum coverage range of a millimeter-wave system?

The ideal maximum coverage range of a single base station in the millimeter-wave system can be calculated by equation (6), which is approximately 980 m. Figure 6 shows that the running time of the proposed algorithm increases linearly with the length of movement trajectories under the given simulation environment.

How do millimeter-wave communications work?

Consequently, millimeter-wave communications rely heavily on beam management (e.g., beam training, alignment, and tracking) to select the appropriate beam during user equipment (UE) movement in a quick manner 2.



Millimeter wave base station communication distance



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...

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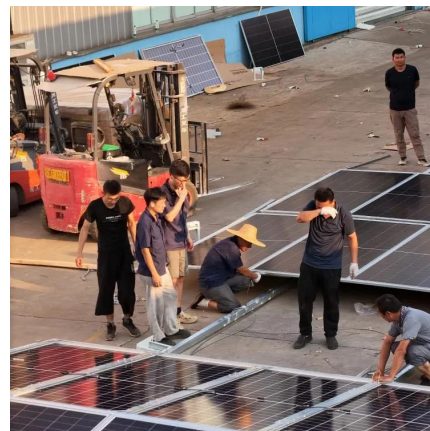


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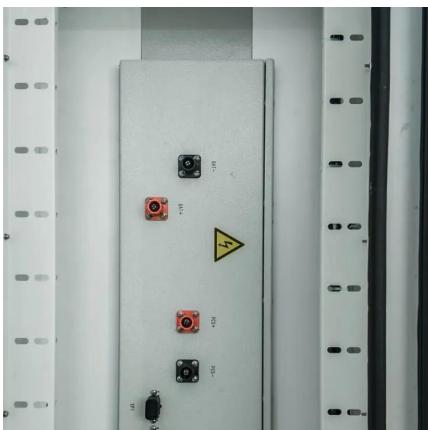
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