MODERNIZATION SOLAR

How does the EMS of solar container communication stations solve adjacent frequency interference

Overview

How does sun interference affect satellite-based communication?

Satellite-based communication is affected by sun interference which is caused by the sun passing directly behind a geostationary satellite as seen from a receiving earth station, see Figure 1.

What causes adjacent channel interference?

Signals which are adjacent in frequency to the desired signal cause adjacent channel interference [7, 8]. ACI is brought about primarily because of imperfect receiver filters which allow nearby frequencies to move into the pass band, and nonlinearity of the amplifiers.

How does solar thermal noise affect a receiver earth station?

For the receive earth station, this once-a-day natural phenomenon of additional solar thermal noise is noticed as a source of interference, which causes signal degradation (interference causing lower link availability) or even daily outages (total signal loss) for small periods of time.

What is interference in a satellite signal?

Interference is the disruption of a signal travelling along a medium, due to another signal or effect that can alter the signal characteristics in the definite frequency spectrum. For satellite signals which are basically electromagnetic waves, interference is known as electromagnetic interference (EMI) or radio-frequency interference (RFI).

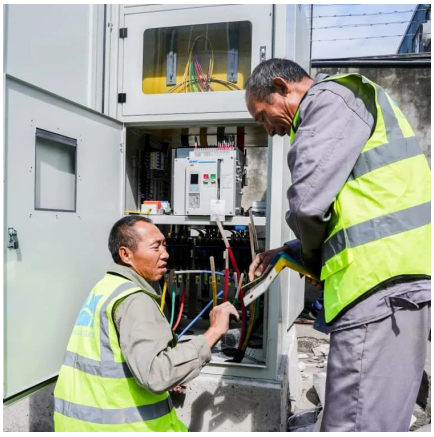
How does the EMS of solar container communication stations solve

[The Electromagnetic Compatibility between FAST and Public ...]

Nov 11, 2022 · In the case of electromagnetic interference (EMI), considering the frequency coordination requirements, we propose the strategies for interference avoidance and using ...

[Wireless Communication Lecture 3]

Dec 21, 2008 · Channels that are adjacent in frequency are supposed to be unable to interfere with each other. In practice, electronics are imperfect, and adjacent channels may have ...



[Sun Interference Background]

Sun Interference Background Satellite-based communication is affected by sun interference which is caused by the sun passing directly behind a geostationary satellite as seen from a receiving ...

[(PDF) Adjacent Channel Compatibility Evaluation and Interference]

Jan 1, 2020 · Adjacent Channel Compatibility Evaluation and Interference Mitigation Technique Between Earth Station in Motion and IMT-2020

Report for GSMA on the mitigations required for ...

Apr 7, 2021 · Since this is an adjacent band compatibility problem, the mitigation considered is based on frequency separation. We firstly perform a co-frequency interference analysis and ...

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The rapid proliferation of wireless systems has led to an increasingly congested electromagnetic (EM) spectrum, where interference poses significant challenges to communication reliability ...

Adjacent-Channel Interference

Adjacent channel interference (ACI) is defined as interference caused by signals that are adjacent in frequency to a desired signal, primarily resulting from imperfect receiver filters and amplifier ...

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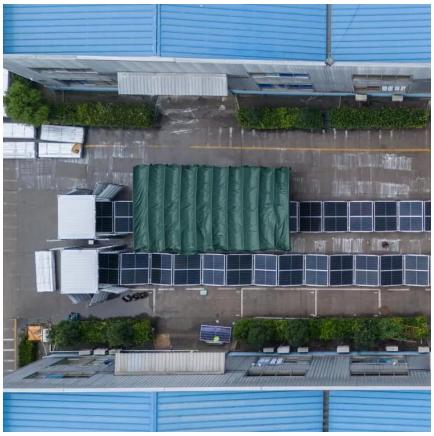

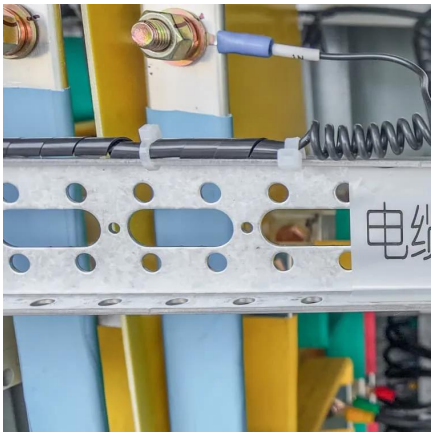

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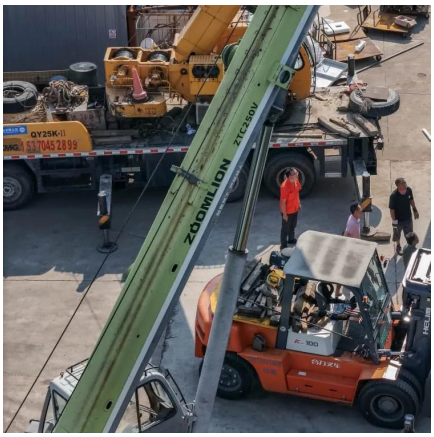

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Wireless Communication Lecture 3

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